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The proposed project consists of an interceptor sewer and a wastewater treatment facility with a capacity of 0.84 mgd to serve the combined needs of the Palmer Lake and Monument Sanitation Districts and the Woodmoor Water and Sanitation District. A total of approximately 21,000 feet of interceptor has been constructed, consisting of about 12,600 feet of 12-inch diameter pipe and 8,900 feet of 10-inch diameter pipe. The proposed treatment facility would consist of two aerated lagoons followed by a polishing pond and a chlorination facility located on the east bank of monument creek at the site of the existing lagoon belonging to the Monument Sanitation District. Effluent would be discharged to Monument Creek which flows through the project area. The effluent discharged to Monument Creek would be improved in quality and would meet current water quality standards. Future population growth in the area would be assured of adequate sewage treatment service. About 15 acres of land utilized for the treatment facility would be committed for the life of the project. The project will make possible a greater density of urban development, but in general conformance with local land use planning and zoning.

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FINAL
ENVIRONMENTAL IMPACT STATEMENT

Palmer Lake Sanitation District
Palmer Lake, Colorado

Prepared by

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION VIII DENVER, COLORADO

DECEMBER 1974

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U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

FINAL ENVIRONMENTAL STATEMENT
PALMER LAKE SANITATION DISTRICT
PALMER LAKE, COLORADO
PROJECT NO. C 080306

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ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
DENVER, COLORADO
DECEMBER, 1974

Approved by:

Donald P. Dubois
Deputy Regional Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80203

December 31, 1974

TO ALL INTERESTED GOVERNMENT AGENCIES AND THE PUBLIC

The enclosed final environmental impact statement for wastewater treatment facilities in the Palmer Lake Sanitation District, Palmer Lake, Colorado is submitted for your review in accordance with the National Environmental Policy Act of 1969. The final impact statement has been revised from the draft (issued June, 1974) to reflect comments received from government agencies and the general public. It is imperative that this office of EPA be notified immediately of any objections of a substantive nature to this project. This final environmental impact statement has been filed with the Council on Environmental Quality and comments should be submitted to this office of EPA on or before February 7, 1975.

Donald P. Dubois
Deputy Regional Administrator

Enclosure

Striving to better, oft we mar what's well.

(King Lear, 1/iv)

O' woe is me,
To have seen what I have seen,
See what I see! (Hamlet, III/i)

PALMER LAKE SANITATION DISTRICT
PALMER LAKE, COLORADO
Project No. C 080306

( ) Draft (x) Final Environmental Statement

1. Name of Action: (x) Administrative ( ) Legislative

2. Description of Action: The proposed project consists of an interceptor sewer and a wastewater treatment facility with a capacity of 0.84 mgd to serve the combined needs of the Palmer Lake and Monument Sanitation Districts and the Woodmoor Water and Sanitation District. A total of approximately 21,000 feet of interceptor has been constructed, consisting of about 12,600 feet of 12-inch diameter pipe and 8,900 feet of 10-inch diameter pipe. The proposed treatment facility would consist of two aerated lagoons followed by a polishing pond and a chlorination facility located on the east bank of Monument Creek at the site of the existing lagoon belonging to the Monument Sanitation District. Effluent would be discharged to Monument Creek which flows through the project area.

3. Environmental Impacts:

(1) The effluent discharged to Monument Creek would be improved in quality and would meet current water quality standards.

(2) Future population growth in the area would be assured of adequate sewage treatment service.

(3) About 15 acres of land utilized for the treatment facility would be committed for the life of the project.

(4) The project will make possible a greater density of urban development, but in general conformance with local land use planning and zoning.

4. Alternatives:

The alternatives considered are as follows:

(1) Service area

(2) Design Sizing of Treatment Facility

(3) Treatment Methods

(4) Effluent Disposal

(5) Sludge Disposal

(6) Treatment Site Location

5. Distribution:

The attached list shows the agencies, groups, and individuals requested to comment on this draft statement.

6. Draft Statement sent to Council on Environmental Quality:

July 12, 1974.

7. Final Statement sent to Council on Environmental Quality:

December, 1974.

FOREWORD

This draft environmental statement relating to sewage treatment facilities for the Palmer Lake Sanitation District has been prepared pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 and in response to a directive on January 17, 1974 by the United States District Court for the State of Colorado to proceed with preparation of a statement.

A negative declaration supported by an environmental appraisal stating EPA's reason for deciding not to prepare an environmental statement on the project was issued January 26, 1973. On February 7, 1973 a Federal grant offer of $394,275 was made by EPA under provisions of the Federal Water Pollution Control Act, to the Palmer Lake Sanitation District and accepted by the District on February 13, 1973. (The grant offer and acceptance are contained in the appendix). Subsequently, comments were received on the environmental appraisal, questioning the decision to proceed without an environmental statement. EPA's re-evaluation of the appraisal led to the conclusion that the original decision to proceed was justified. The environmental appraisal was revised and the negative declaration reissued on April 23, 1973 (See appendix).

As a result of litigation brought by Pine Hills, Inc., et. al. on July 17, 1973, the Environmental Protection Agency was directed on January 17, 1974 by the United States District Court for the State of Colorado to proceed with preparation of an environmental statement on the project in accordance with Section 102(2)(c) of the National Environmental Policy Act (NEPA).

At the time litigation commenced, July 17, 1973, the interceptor portion of the project was under construction and was subsequently completed.

The action by Pine Hills, et. al., was brought essentially under the National Environmental Policy Act of 1969, and various regulations thereunder, particularly the Guidelines of the Council on Environmental Quality, Proposed EPA Regulations and EPA Interim Regulations for the Preparation of Environmental Impact Statements.

Subsequent to the court order on January 17, 1974, the court's Findings of Fact and Conclusions of Law & Decree was issued by the U.S. District Court on April 1, 1974. The following statements from that document are relevant:

"The principal issue in the action is whether or not the agency (Environmental Protection Agency) decision that an Environmental Impact Statement was not required should be sustained as properly made under the Act and regulations."

"The plaintiff's position is that the Federal funding of the sewage project puts in motion a major Federal action significantly affecting the quality of human environment, and is highly controversial, and thus requires the preparation and distribution of an Environmental Impact Statement. All the defendants, on the other hand, contend that the administrative record along with the Environmental Impact Appraisal which accompanies the agency's Negative Declaration (the Appraisal and Declaration of April 23, 1973) adequately supports the determination that an Environmental Impact (Statement) was not required for this project and that the agency decision therein was in accordance with law."

"The defendants further contend that despite the fact that there were protests registered to the location of the project and its scope, such did not arise on a level which could be called "highly controversial"."

The Court further stated:

"In the opinion of this Court, grasping the tenor and philosophy that is threaded throughout the legislation, using the standard set forth in, among others, the Butz case heretofore mentioned, we cannot conclude that the agency's decision was reasonable in the light of the high standards set up by the statute for preparing Environmental Impact Statements."

"In our opinion, the record shows that the project significantly affects a residential neighborhood. Further, the project appears to have aspects of high controversiality."

"We also note that the intended project abuts a residential area and aside from aesthetic considerations that potentially would be affected by the project, we have the question of whether the purity of the air in the subject area would be affected. All of the named factors have persuaded us in passing on the reasonableness of the agency's Negative Declaration."

"The court is of the opinion that reasonableness dictates that an Environmental Impact Statement be prepared; that the subject project has aspects of being a major federal action, that it significantly affects the quality of the human environment within the contemplation of the National Environmental Policy Act of 1969, 42 U.S. Code 4332(2)(C).

"For the totality of these reasons, the court is satisfied that there should be an Environmental Impact Statement prepared in this case."

The Palmer Lake Sanitation District was asked to hire a consultant to prepare a detailed environmental assessment on the project. The District retained the firm of CH_2M-Hill for preparation of the assessment, and prior to initiating work on the assessment, representatives of the firm met with EPA to discuss the requirements for the assessment. During the course of preparation of the assessment, periodic telephone discussions were held with CH_2M-Hill regarding the project. On April 10, 1974, representatives of CH_2M-Hill met with Region VIII EPA, Colorado Department of Health, and the Palmer Lake Sanitation District to discuss the progress on the assessment.

Field inspections of the project area have been made on several occasions by Region VIII EPA staff. EPA has evaluated the environmental assessment and determined that it is generally satisfactory from a technical and environmental standpoint. Except as may be otherwise noted herein, the environmental assessment is hereby made part of the environmental statement. Planning documents, engineering reports, and correspondence received on the project have also been taken into consideration in preparing the statement.

The environmental statement as prepared by EPA is an independent evaluation of the social, economic, environmental, and engineering aspects of the project.

The draft environmental statement tentatively recommended a site about one-half mile downstream from the existing lagoon, but recognized that there were problems with the site which would have to be overcome before it could be used. The draft especially solicited comments in the following areas: (1) consistency of selected alternative with local land use and planning policies, (2) establishment of a buffer zone around Site 2 to prohibit residential encroachment, (3) financial feasibility of selected alternative as it affects the Palmer Lake and Monument Sanitation Districts and the Woodmoor Water and Sanitation District.

It was also recognized in the draft statement that there were additional problems associated with using the downstream site (Site 2), namely, detailed engineering studies had not been made and that it would be necessary to obtain a new agreement among the Palmer Lake and Monument Sanitation Districts, the Woodmoor Water and Sanitation District and the Colorado Department of Health.

EPA's evaluation of the project in the draft environmental statement placed heavy emphasis on the impact of the proposed project on the residential area around the site originally selected (Site 1). It was the conclusion of the draft statement that sufficient cause existed to make an effort to utilize the downstream site.

After carefully evaluating the statements and data contained in the transcript of the public hearing and comments received on the draft statement, EPA has concluded that (1) it is financially unfeasible to utilize the downstream site (Site 2), and that the costs associated with using Site 1 are lower than for Site 2 but approach the financial capacity of Districts, (2) there is essentially no possibility of obtaining agreement among the three sanitation districts, the State of Colorado, and El Paso County to utilize Site 2, (3) the existing situation with septic tank systems in Palmer Lake is more severe than the original evaluation indicated. Therefore, Site 1, (existing Monument lagoon) has been selected as the site on which the proposed project should be constructed.

The EPA portion of the text of the draft statement has been revised to reflect comments received on the draft statement, both at the public hearing and in letters of comment. It also endeavors to correct errors that have been pointed out and to acknowledge errors that occur in the CH_2M assessment, though the assessment itself has not been revised.

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I. BACKGROUND

A. Proposed Action

The proposed action is a wastewater treatment facility to be constructed for the Palmer Lake Sanitation District which was formed to provide sewerage facilities for the community of Palmer Lake, Colorado. The proposed project consists of construction of an aerated lagoon facility to provide wastewater treatment for Palmer Lake, the Monument Sanitation District, and the Woodmoor Water and Sanitation District.

The project is necessitated by failure of septic tank drain fields and cesspools utilized through the years in Palmer Lake. Also Monument and Woodmoor presently have inadequate wastewater treatment via the existing Monument Lagoon, and the Sanitation Districts encompassing these communities are included in the project.

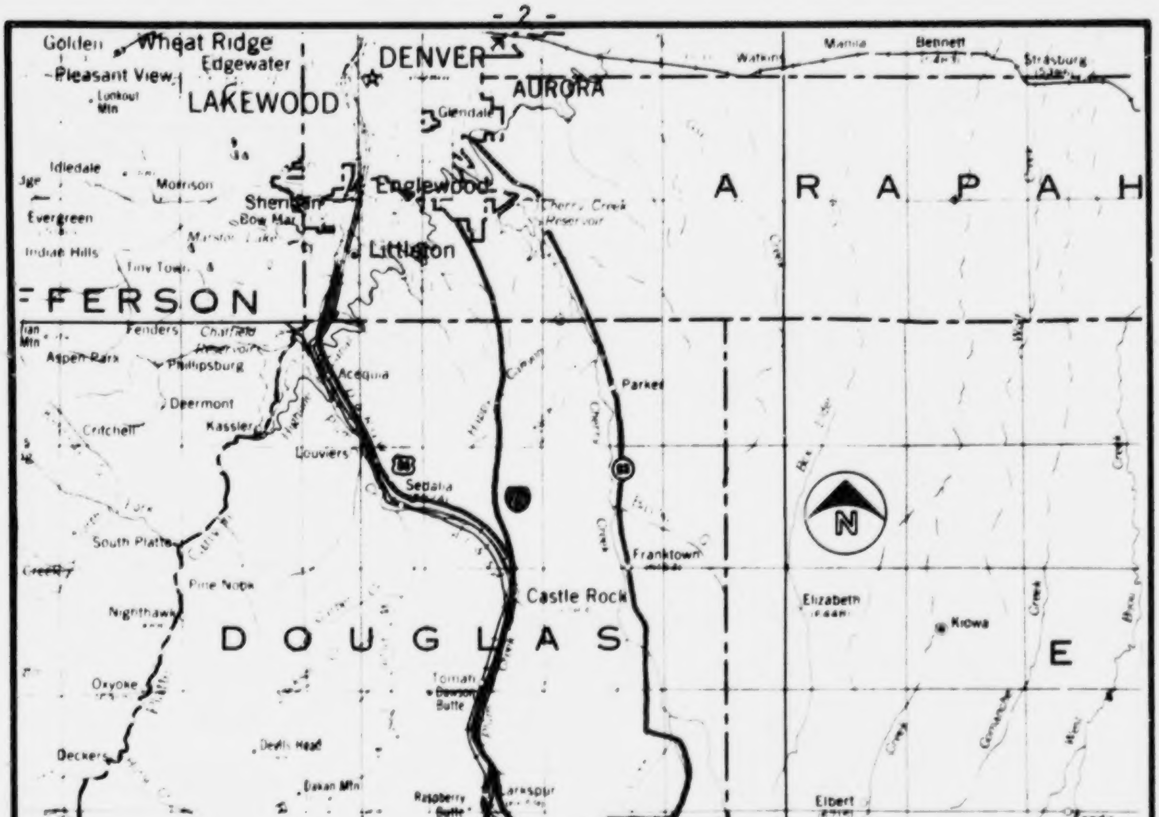
The proposed project would be located on Monument Creek at the site of the existing lagoon belonging to the Monument Sanitation District. The facility would serve an initial population of approximately 2,600 persons and would have a design capacity of approximately 7,000 - 7,500 persons.

The total project cost is estimated at $488,000 including engineering and administrative costs. Of this amount $470,000 is eligible for participation under the Federal Water Pollution Control Act Amendments of 1972. The Environmental Protection Agency would provide 75 percent of the eligible cost and the State of Colorado would provide 5 percent. The remainder of the costs will be borne by the Palmer Lake Sanitation District, the applicant for Federal funds.

B. Social and Environmental Setting

(1) Communities

The relationship of the project to the Denver and Colorado Springs area is shown on Figure 1.


Golden
Wheat Ridge
Edgewater
Pleasant View
DENVER
AURORA
LAKEWOOD
Lookout Mtn
Glendale
Watkins
Manila
Bennett
Strasburg
Idledale
Morrison
Englewood
Sheridan
Bow Mar
Evergreen
Marston Lake
Cherry Creek Reservoir
Indian Hills
Tiny Town
Littleton
A R A P A H
FERSON
Fenders
Chatfield Reservoir
Aspen Park
Phillipsburg
Acequia
Parker
Deermont
Kassler
Critchell
Louviers
Sedalia
South Platte
Franktown
N
Pine Nook
Castle Rock
Elizabeth
Kiowa
Nighthawk
D O U G L A S
E
Oxyoke
Tomah
Dawson Butte
Deckers
Devils Head
Dakan Mtn
Larkspur
Raspberry Butte
Elbert
Fondis
RAMPART
Greenland
Thunder Butte
Westcreek
PALMER LAKE
WOODMOOR
Turkey Rock
Palmer Lake
Table Rock
Mt Deception
Monument
AIR FORCE ACADEMY
Rattlesnake Butte
Signal Butte
Eastonville
MONUMENT
Peyton
US Air Force Academy
Black Forest
George
Woodland Park
Crystola
Mt Saint Francis
Breed
Divide
Green Mtn Falls
Falcon
Chipita Park
Pikeview
TELLER
Cascade
COLORADO SPRINGS
Midland
Manitou Springs
Pikes Peak
Ellicott
Ivywild
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P A S O
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10

FIGURE 1

REGIONAL SETTING

Palmer Lake was incorporated in 1889. Growth through the years has been modest. It has been adversely affected by the shift eastward of the main highway away from the city, and stimulated by development of the Air Force Academy to the south. There is little employment locally and most residents are retirees or are employed in the Denver or Colorado Springs area.

Monument was incorporated in 1879 and until recent years, did not experience significant increase in population. Annexations during the past four years have contributed to the present population of approximately 800 persons.

The Woodmoor development was initiated about 9 years ago. There are approximately 3,000 residential lots within the present boundaries of the Woodmoor Water and Sanitation District and most of them have been sold, primarily for investment or retirement purposes. About 220-250 homes have been constructed in Woodmoor.

Outside the three sanitation districts land is largely vacant. Although considerable rural land has been platted into lots larger than 2.5 acres, the level of development is low and homes are widely scattered. Waste treatment in these rural areas is by septic tank systems.

(2) Geography.

The local service area lies within northwest El Paso County at the foot of the Rampart Range. The northern boundary is along a ridge, locally known as Monument Hill, which extends eastward from the range, separating the Platte River drainage on the north from the Arkansas River drainage on the south.

The service area is entirely within the drainage of Monument Creek and its tributaries. Flowing south along the east boundary of the Air Force Academy, the creek joins Fountain Creek at Colorado Springs.

Local elevations range from 6,660 feet on Monument Creek at the Academy boundary to 7,500 feet in the higher portions of Palmer Lake and Woodmoor. Local topography is varied, consisting of generally sloping and rolling bench lands extending upward from Monument Creek to the Rampart Range on the west and eastward to the hills of the Black Forest.

Palmer Lake is a natural occuring body of water which discharges by seepage into Monument Creek. Monument Lake is an artificial lake whose surrounding land is owned by the City of Monument and developed for recreation. Thirty acre Woodmoor Lake is part of the private development.

(C) Climate

Due to unusual geographic features at the mountain front and Monument Hill, climatic conditions within the service area are variable and unpredictable, capable of changing considerably over a short period of time. Based upon available records the following will indicate the range of conditions which may be expected.

Normal temperatures for the City of Monument prior to 1960 varied from a low of 28.4 degrees in January to a high of 67.6 degrees in July, with an annual average of 46.6 degrees. In January the mean daily temperature ranged from a minimum of 13.8 degrees to a maximum of 41.7 degrees and in July from a minimum of 50.7 degrees to a maximum of 82.1 degrees. The lowest recorded temperatures were minus 40 degrees and the highest 100 degrees.

Rainfall is erratic and limited but somewhat greater than at lower elevations to the north and south. At Monument, normal annual precipitation is 18.55 inches with a low of .50 inches in December and a high of 2.8 inches in May.

Summer rainfall often occurs in short, heavy thundershowers during the afternoon and evening which result in heavy runoff and potential for flooding. In May of 1935, 18 inches of rainfall fell in the headwaters of Monument Creek in a 12 hour period.

Snowfall data for the Academy indicates an average of 66 inches per year with a high of 17 inches in April. Winter snows persist on north facing slopes until spring melting, often creating seeps and boggy places.

(4) Plant and Animal Communities

(a) Plant Communities

The project study area is near the boundary of the Platte and Arkansas River systems and between the plains and the Rocky Mountains. The Monument Creek drainage area has a wide range of plant and animal communities which are somewhat different from those in the foothills areas in the Boulder, Denver, and Fort Collins area.

A preliminary classification of the major plant communities is as follows:

1. River flood plain shrub communities
2. Dry meadow and mesa grasslands and chaparral
3. Foothills forest and shrub communities.

River and Flood Plain Communities:

Soils in this area are easily eroded and occasional summer thunderstorms result in sudden, severe flooding. These factors are important in controlling the shrub community of the river bottoms. There are willows with occasional cottonwood trees scattered among them. Instability in the flood plain is worsened by human disturbance of vegetation along streams and in the surrounding hills. River bed changes and siltation during floods do not enhance plant community development. An excellent example is Dirty Woman Creek, whose bed is heavily silted as a result of development at Woodmoor.

Dry Meadow and Mesa Grasslands and Chaparral:

In the well-drained areas above Monument Creek are two distinct communities; shortgrass prairie and oak chapparal. No recent studies exist, but in 1906, immediately east of the Garden of the Gods on the shortgrass areas, a most important species were grama grasses (Boutelous spp.). Locally these meadows occur principally between Monument Creek and the mesas, and on the mesas north of Hay and Beaver Creeks. Gambell's oak (chaparral) dominates the sides of the mesas and gently sloping areas, forming thickets up to three meters high. Occasional Ponderosa pine and Douglas fir are found within the thickets. The oak thickets provide spring forage for herbivores such as mule deer. They also stabilize soil well and should be protected wherever possible.

Foothills Forest and Shrub Communities:

Two relatively distinct forested areas exist which are undergoing a slow ecological transition: 1) Ponderosa pine forest and oak chaparral on the mesas east of Mount Herman, and 2) the coniferous forest and shrub on the slopes of Mount Herman and Raspberry Mountain. The first area contains stands of Ponderosa pine between 100 and 150 years old, and Gambell's oak quite similar in structure to other mesa areas. Most of the pine stands intergrate with the oak and have relict oaks within them.

(b) Animal Communities

Mammal

During field studies conducted by Ecological Analysts, Inc., of Boulder, Colorado, sightings or evidence was found of the following mammals:

coyote, fox, beaver, muskrat, pocket gopher, pine squirrel, vole and porcupine.

The Monument Creek flood plain is relatively homogeneous, particularly in south portions of the study area where sandy meadows and brushy stream banks exist. These areas probably do not support a large mammal fauna because of area restriction and lack of soil and vegetation types.

Birdlife

During an April 1974 bird census, waterfowl, normal winter residents and early migrants such as Mountain bluebirds were seen. For additional information on birdlife at each site considered in this study see the environmental assessment.

Fish

A sampling of fish at the four sites on Monument Creek for this study indicated that the white sucker (Catostomus comersoni) constitutes the major species. Sixty of the seventy-six fish taken were of this type. The balance consisted of northern creekchub (Semotilus atromaculatus), 8; longnose dace (Rhinichthys cataractae), 3; plains stone roller (Campostoma anomalum), 3; Rio Grande chub (Gila nigrescens), 2. Eighty percent of the fish were taken from Site 1.

(5) Geology and Soils

In the service area, local geography has been created primarily by events associated with the creation of the Rampart Range. During the Laramide mountain building period, the range was forced upward along a north/south fault. This fault has long been inactive and has not been associated with seismic activity in historic times. To the west, Precambrian granite is upthrust into the commanding mountain range.

Soils in the area are generally sandy or gravelly with fine clays which are derived from adjacent upper Dawson Formations. Surface deposits usually have good porosity, but at depth, heavy clay lenses of random occurrence prevent vertical movement to the water table. Soils have generally permitted the use of septic tank drainage fields on five acre tracts of land. In the cities where dense population concentrations exist, septic tank and cesspool use has proven unsatisfactory.

In Palmer Lake, sloping sites on impervious underlying formations have permitted effluent to leach onto the surface. In ravines east of Highway 25, high water tables may make use of septic tanks impracticable. West of Monument Creek, septic tanks have worked well and are expected to continue to do so on the large tracts platted there.

Along Monument Creek soils are primarily Pring and Tomah Loamy Sands. The Pring soils are gently sloping and well drained. Surface layers to 18 inches in thickness have a sandy loam or loamy sand texture. The subsoil is a sandy loam but may be more gravelly. Limitations are slight for septic tank use but severe for sewage lagoons, due to rapid permeability. Pollution is a hazard for septic tanks because of permeable substratum. Stability is fair to good for dikes and levees and the shrink-swell potential is low. Limitations are slight for shallow excavations except for loamy sand which is severely limited.

The Tomah Soils are deep and well drained. In surface layers the upper parts are loamy sand and the lower parts are sand of 24 to 30 inches thickness. The 2- to 5-foot thick subsoil is sand with thin bands of sandy clay loam, overlying a sand or loamy sand substratum. Limitations for septic tank use are slight but pollution is a hazard in places because of permeability in substratum. Lagoon use has severe limitations because of rapid permeability. Excavations are limited severely by loamy sand and sand textures. Compaction is fair to good for embankments.

C. HYDROLOGY

Surface Water

The area served by the Palmer Lake, Monument, and Woodmoor Sanitation Districts lies within the Arkansas River Basin. The study area is drained by Monument Creek which flows south and discharges into Fountain Creek north of Colorado Springs. Within the Monument Creek watershed are several small lakes or reservoirs and numerous streams.

Monument Creek is the major stream within the study area. It originates on the east slope of the front range west of Monument and drains south to Fountain Creek in Colorado Springs. The stream has a wide flood plain with steep side slopes. The vegetation on the slopes varies from grass to pine except where banks are bare and eroding. The stream meanders within its bed and is periodically subject to flooding.

Very little data is available on the flows of Monument Creek within the study area. Streamflow and quality has been measured at the mouth of Monument Creek. This data is influenced by transmountain water diversions through west Monument Creek and is of little value in establishing flow and water quality variations within the study area.

At least four or five major floods have occurred in the last 40 years. On 30 May 1935, 18 inches of rain fell on the headwaters of Monument Creek between 6:00 a.m. and 6:00 p.m., resulting in the most disasterous flood within local knowledge. Several bridges were destroyed and the railroad tracks between Monument and Pike View were intermittentally undercut. Other floods have occurred in 1942 or 43, 1945, 1965 and 1973. The existing Monument lagoon was severely damaged and a portion of it was washed out during the 1965 flood.

Although these floods were serious, little is known about actual flood volumes. Channel modifications in the project area would be designed for a flow of 20,000 CFS. This is believed to be the 100-year flood-flow at the Northern boundary of the Air Force Academy approximately 2 miles below the existing ument lagoon. The lagoon engineer is also presently studying improvements needed at the Monument Lake dam above the existing Monument lagoon. Spillway design will be based upon a flow of 11,000 CFS.

Although seasonal variations in streamflow are not known, they are expected to be extreme. During dry periods, streamflow at treatment sites considered could be less than treatment plant discharge. Limited water quality data is available for the local area.

Available water quality data is summarized in the assessment. Applicable discharge standards are as stated on page 50 of the EIS rather than as summarized in the assessment.

Ground Water

Four water-bearing formations are found in the study area:

1. Laramie-Foxhill aquifer
2. Dawson Arkose aquifer
3. Pediment Gravel
4. Alluvium

Several wells within the study area draw water from the two deepest water bearing formations. The Laramie-Foxhill aquifer is composed of water yielding sandstone beds in the upper part of the Foxhill sandstone and the lower part of the Laramie formation. This aquifer is confined above and below by thick intervals of relatively impermeable beds. The aquifer can be divided into three units: The highest unit which is about 75 feet thick is composed of well sorted fine to medium grain sandstones; the middle unit which is 65 feet thick is composed of sandy shale interbedded with thin seams of coal; the lowest unit which is 150 feet thick is composed of fine to medium grain sandstone.

Additional information on the groundwater resource is contained in the assessment.

D. Population

The population of northwest El Paso County has been relatively stable over a long period of time. People were concentrated in and near established towns and few families resided in outlying areas. During the past few years, improved highway access and the establishment of the Air Force Academy stimulated an increase of building and population growth in the area. Some 3,000 home sites were created at Woodmoor. Large and small lot subdivisions were laid out in and around Palmer Lake and Monument. City boundaries have expanded to take in new development.

The consultant preparing the assessment evaluated recent population projections for the area and found no reason to reject the 1990 population figure of 11,845 for the project service area as contained in EPA's environmental appraisal of April 23, 1973. There have, however, been some modifications to the projections for the intervening years between 1975 and 1990 based on the consultant's investigations. These projections provide a reasonable basis for design of the facility and are shown in Table 1. The projection of 18,310 for 1990 is considered very optimistic.

E. Land Use and Land Use Plans

Land use in the area of the three sanitary districts is devoted primarily to residential purposes with single-family residences predominating. The older dwellings are concentrated in the original portions of Palmer Lake and Monument while clusters of relatively new homes have been constructed through the middle portions of Woodmoor. Mobile home developments exist in southern Palmer Lake and Monument. Thirty-seven apartment units are being constructed in the Woodmoor community center and condominium units are under construction on the north side of Monument Lake.

A few commercial areas exist in Palmer Lake along Highway 105 and in Monument near the Highway 25-105 highway interchange. In Woodmoor a commercial

TABLE 1

POPULATION PROJECTIONS BY SELECTED YEARS TO 1990

AREA	1960 (8)	1970 (8)	1974 (3)	1975 (6)	1980 (6)	1985 (6)	1990 (6)	1990 (4)
Monument	204	393	803	830	950	1075	1200	5235 (5)
Palmer Lake	542	947	1177	1280	1500	1825	2200	2375
Woodmoor	0	315	821	1105	2350	4625	8500	10700
Total	746	1655	2801	3215	4800	7525	11900 (1)	18310
Total Served by Project			2600 (2)					
Design Population for Service Area (6)			2801	3215	4800	7525	11900	
Fringe Areas (7)	0	200	400	419	656	893	1130	1130
Total For Area	746	1855	3201	3634	5456	8418	13030	19440

(1) Compares with 11,845 in EPA Environmental Appraisal of April 1973

(2) Estimate by Palmer Lake Sanitation District

(3) Current estimate by Pikes Peak Area Council of Governments

(4) Projections by PPACG for City of Palmer Lake planning study

(5) Based upon development of Village" project at Monument (PPACG)

(6) Projections, this study: based upon 9.4% average annual increase 1974 to 1990

(7) PPACG estimate for Fringe Areas

(8) U.S. Bureau of Census

area has been established northwest of the interchange. It consists of approximately 10 business and service establishments and a 127 unit motel serving the surrounding countryside and the traveling public. Two concerns have located in the Woodmoor Technical Center north of Highway 105 along the freeway.

Outside the sanitation districts, large lot subdivisions (2-1/2 to 5 acres) have been established. Wastewater treatment for these areas would be provided by septic tanks. See Figures 2 & 3 Land Use and Development Factors, and Land Use Planning, respectively.

A city plan prepared for Palmer Lake has not been adopted, however, it calls for low density residential development at two to five units per acre in most city areas and for a greenway on Monument Creek. The City has been zoned. Zones follow the existing patterns of land uses and do not contemplate any substantial change in the community.

The PPACG and El Paso County cooperated in the preparation of the "Pikes Peak Regional Land Use Plan, 1970-1990," May 1970. Copies are unavailable but may be examined in the PPACG office.

This plan is based upon 1964 land use data. Although some development has occurred since the preparation of the plan, these Policies include:

Avoidance of floodplains and slopes in excess of 20%.

Maintaining the identity and individuality of Palmer Lake Monument, and Woodmoor;

Improvement of the local economy so that the area will become more self sufficient and less of a bedroom residential area;

Maintain commercial uses for local convenience shopping and tourist uses;

Conserve and expand recreation potentials of Monument and Palmer Lakes and Monument Creek;

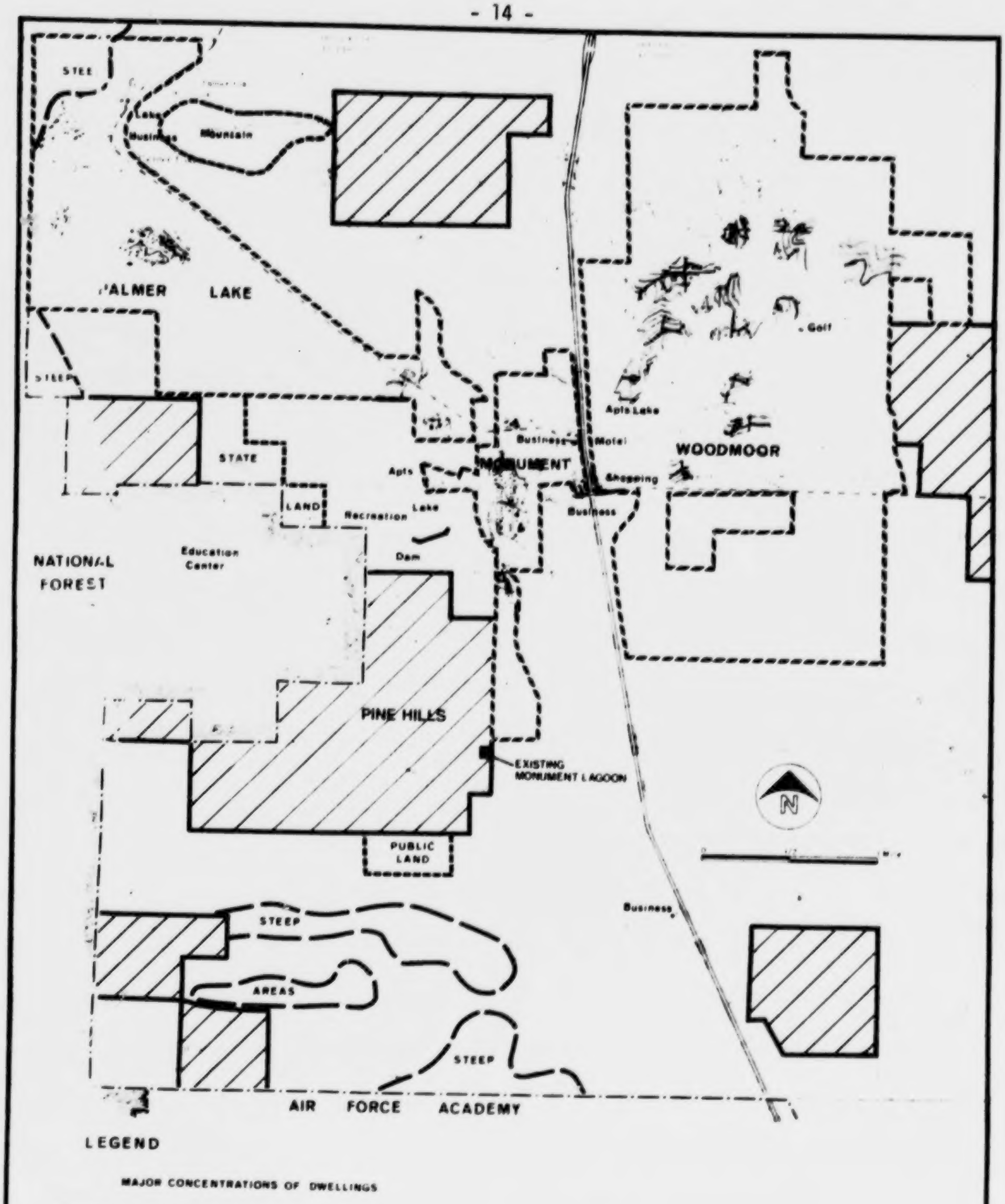

STEE
Lake
Business
Mountain
PALMER LAKE
STEEP
STATE
LAND
NATIONAL FOREST
Education Center
Recreation
Lake
Dam
Apts
Business
Motel
MONUMENT
Shopping
Business
WOODMOOR
Apts Lake
Golf
PINE HILLS
EXISTING MONUMENT LAGOON
PUBLIC LAND
N
Business
STEEP
AREAS
STEEP
AIR FORCE ACADEMY
LEGEND
MAJOR CONCENTRATIONS OF DWELLINGS
LARGE LOT SUBDIVISIONS SEPTIC TANK USE
DISTRICT BOUNDARIES

FIGURE 2

LAND USE
AND
DEVELOPMENT FACTORS

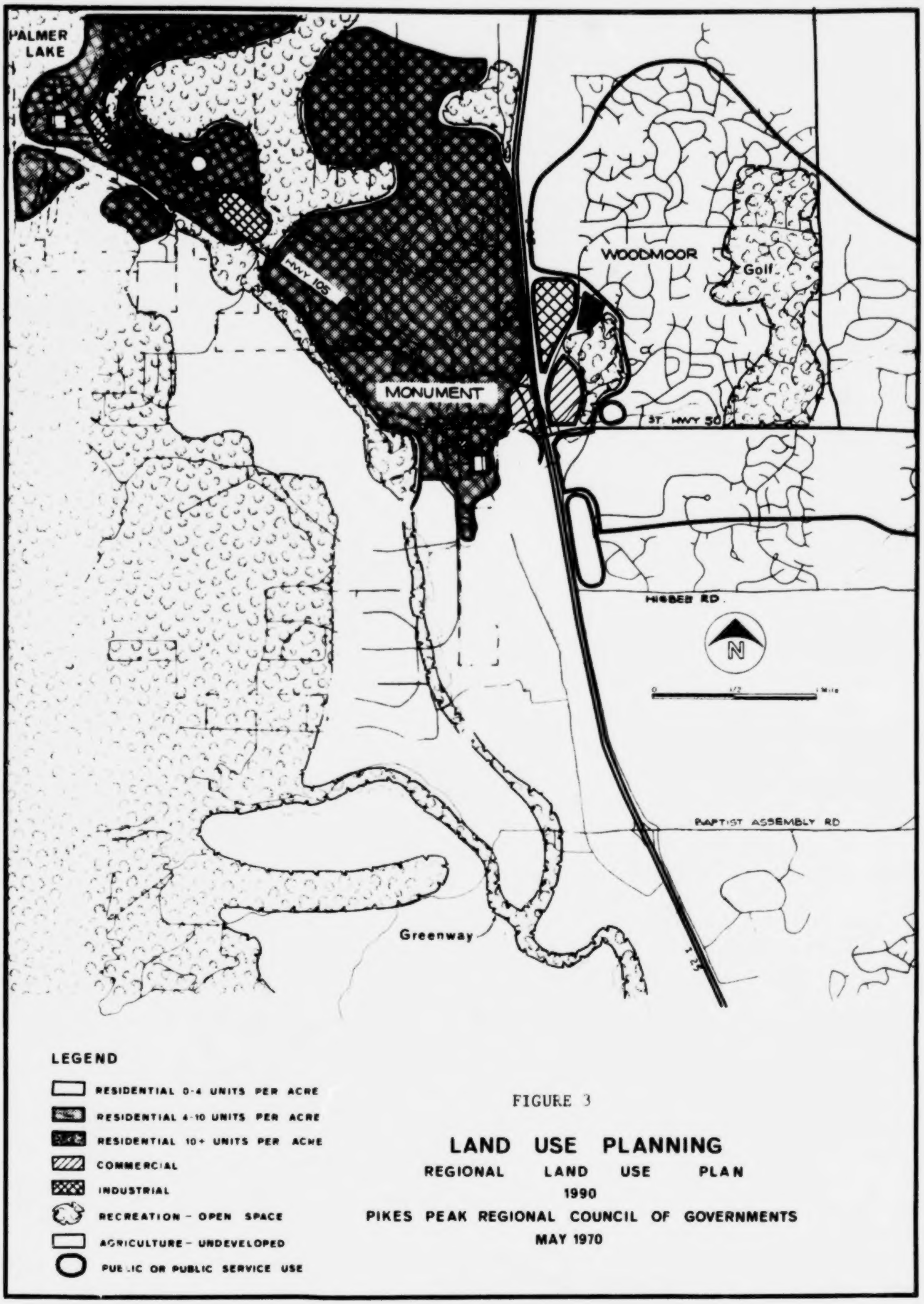

PALMER LAKE
HWY 105
MONUMENT
WOODMOOR
Golf
ST HWY 50
HIGBEE RD
N
0
1/2
1 Mile
BAPTIST ASSEMBLY RD
Greenway
I 25
LEGEND
RESIDENTIAL 0-4 UNITS PER ACRE
RESIDENTIAL 4-10 UNITS PER ACRE
RESIDENTIAL 10+ UNITS PER ACRE
COMMERCIAL
INDUSTRIAL
RECREATION - OPEN SPACE
AGRICULTURE - UNDEVELOPED
PUBLIC OR PUBLIC SERVICE USE

FIGURE 3

LAND USE PLANNING
REGIONAL LAND USE PLAN
1990
PIKES PEAK REGIONAL COUNCIL OF GOVERNMENTS
MAY 1970

Develop area-wide sewerage facility for Palmer Lake, Monument, and Woodmoor.

The 1990 land use map (Figure 3) shows residential development up to 4 units per acre for the Monument, Palmer Lake communities; for Woodmoor north of a line midway between Highway 105; and for the Pine Hills area west of Monument Creek. Recent Woodmoor platting along the north side of Higbee Road is not included. In Monument and Palmer Lake, residential densities would range from 4 to 10 units per acre.

South and east of these residential areas and between Monument Creek in the National Forest in the Palmer Lake area, land is designated in an agricultural/unused category. Commercial and industrial concentrations are shown where these currently exist, including the 70 acre Technical Center at Woodmoor.

"Horizons 72," published by PPACG, is an open space system plan. In northwest El Paso County, it calls for an open space corridor along Monument Creek which links with open space east and west. It also calls for creating park and recreation facilities on two City of Colorado Springs parcels west of Monument Creek on Beaver Creek.

The City of Monument has recently adopted a land use plan prepared with the assistance of the PPACG staff. The plan retains existing residential districts and establishes ample areas for commercial and general development.

County zoning in areas outside cities and sanitary districts is generally 5 acre farm zones or 2-1/2 acre rural residential zones. In all 5 acre zones, septic tank use is permitted. The 2-1/2 acre rural residential zone is designed for areas with sewer systems utilizing private wells, and may utilize septic tanks if approved by local health officials. County planning staff indicate that these zones function somewhat as holding zones, in that conversion to urban densities can be expected where extension of urban facilities is practicable. The county zoning ordinance requirement for Location Approval of sewerage facilities would apply to the proposed project.

A zoning ordinance will be adopted in Monument following adoption of the land use plan. In Woodmoor, deed restrictions control development. Pine Hills has deed restrictions which limit uses to dwellings and probably other recent subdivisions as well.

II. PROJECT ALTERNATIVES

The planning process for the proposed sewage treatment facilities for the Palmer Lake Sanitation District has involved the establishment of project objectives and a consideration of project alternatives. Project alternatives have been evaluated in light of technical, social, economic and environmental considerations.

The major objectives of the project are as follows:

1. To protect the quality of ground and surface water in the Monument Creek drainage consistent with applicable water quality standards and public health requirements.

2. To provide wastewater treatment service which minimizes the overall environmental impact associated with the project.

3. To provide the most cost-effective wastewater treatment consistent with objectives 1 and 2.

A cost-effective project is one which minimizes the total economic costs of the project consistent with environmental and social objectives. Thus, the least expensive project is not necessarily the one to be recommended for construction when environmental and social objectives are considered.

Planning for wastewater treatment facilities must stem from land use goals. Land use planning policies of El Paso County and the Pikes Peak Area Council of Governments call for a limitation on the southward expansion of urban development in a relatively compact form in the vicinity of Palmer Lake-Monument-Woodmoor. These policies provide a constraint on the location of potential treatment sites. Another constraint on the project that is finally recommended for construction is the fact that the interceptor portion of the project originally recommended by EPA for construction has been installed. A considerable sum of money, approximately $185,000, has been invested in the interceptor which must be utilized in whatever project is recommended as a result of this environmental statement.

The number of alternatives which are practicable in the present situation is limited. The alternatives that have actually been considered fall into the following general categories:

A. Service area.
B. Sizing and timing of sewage treatment facility.
C. Treatment methods.
D. Effluent disposal.
E. Sludge disposal.
F. Treatment site location.
G. No action

The following paragraphs discuss alternatives considered and the constraints on the alternatives.

A. Service Area

Alternative service areas considered for this project are discussed in this section. Projects serving these areas would provide essentially the same service, but each would have different environmental impacts, and each has different constraints. Figure 4 shows service areas and treatment sites considered in this environmental statement.

(1) Service Area 1. (Alternative A)

The first service area considered is that area comprising the Palmer Lake and Monument Sanitation Districts and the Woodmoor Water and Sanitation District. A treatment facility located at the southern boundary of the Monument Sanitation District would be ideally

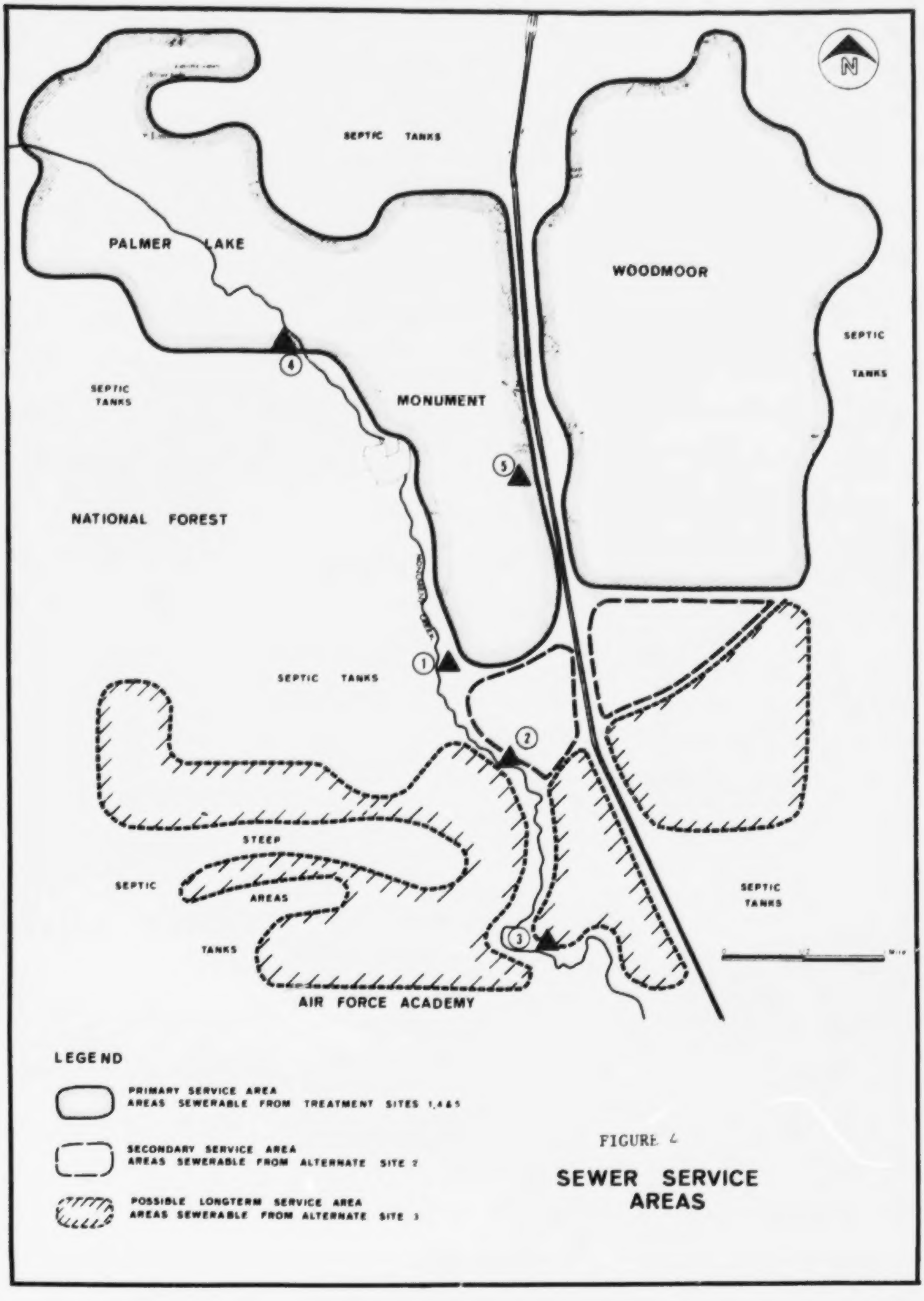

N
SEPTIC TANKS
PALMER LAKE
WOODMOOR
SEPTIC TANKS
4
SEPTIC TANKS
MONUMENT
5
NATIONAL FOREST
1
SEPTIC TANKS
2
STEEP
SEPTIC
AREAS
TANKS
SEPTIC TANKS
3
AIR FORCE ACADEMY
LEGEND
PRIMARY SERVICE AREA
AREAS SEWERABLE FROM TREATMENT SITES 1,4&5
SECONDARY SERVICE AREA
AREAS SEWERABLE FROM ALTERNATE SITE 2
POSSIBLE LONGTERM SERVICE AREA
AREAS SEWERABLE FROM ALTERNATE SITE 3

FIGURE 4

SEWER SERVICE AREAS

located to serve these areas and would be consistent with land use planning policies of El Paso County and Pikes Peak Area Council of Governments. This is the site of the present Monument lagoon. See Site 1, Figure 4.

(2) Service Area 2. (Alternative B)

The second service area considered comprises all of the area previously discussed plus an additional increment of approximately 600 acres south and east of the existing Monument lagoon, including an increment cost of I-25. A treatment facility for this area would be located at Site 2 shown on Figure 4. Selection of this service area would be inconsistent with land use policies for the area, but the additional area included in this alternative service area does not appear to be so significant that the alternative should be rejected.

(3) Service Area 3.

The third service area considered would extend approximately from the north boundary of the Air Force Academy northward to the community of Palmer Lake, and would include the total area discussed under the previous two service areas. A treatment facility for this service area would be located at Site 3 on Figure 4. Selection of this alternative service area is clearly inconsistent with the land use policies of El Paso County and PPACG. A facility for Service Area 1 would provide sewer service primarily to existing urban and urbanizing areas where septic tank use is no longer feasible. Service at Site 2 would be much the same except that an additional 600 acres would be included. Selection of Service Area 3 would make possible sewering of rural areas not as yet planned, platted or zoned for urban densities. According to El Paso County health officials, the use of septic tanks for development in this area would not lead to the pollution problems that have occurred in Palmer Lake and Monument. The current 5-acre zoning is consistent with local plans for the area. County officials have indicated that retaining the area in an agricultural-undeveloped category would be difficult if Site 3 were selected. Without sewer services, however, development could occur at low density utilizing septic tanks and would be in conformance with zoning and planning. Cost estimates for a project for Service Area 3 are excessive, amounting to approximately 1.3 million dollars. Therefore, because of inconsistency with local land use policies and zoning, and excessive cost, Service Area 3 is rejected from further consideration.

(4) Sub-area Service - 3 Separate Facilities

Within service area 1, sub-area service has been considered with each district providing treatment for only that area served by the respective district. For the communities of Monument and Woodmoor sites were selected that would allow gravity sewer service for essentially the entire community. For Palmer Lake, the site selected requires a small amount of pumping in order to utilize the recently installed interceptor to the extent possible.

For the Palmer Lake Sanitation District this would involve a facility on Monument Creek at the southern boundary of the District. (Site 4, Figure 4). A pump station would be required to lift waste from the recently installed interceptor to the treatment facility. A portion of the interceptor would be used as an outfall line to convey effluent to Monument Creek at a point below Monument Lake.

Monument would continue to use its existing treatment lagoon (Site 1, Figure 4) which would be upgraded to meet water quality standards. From the viewpoint of Monument, it would seem that Site 1 is a reasonable location for the Monument service area.

To serve the Woodmoor Water and Sanitation District, Site 5, Figure 4, was considered. This site, however, suffers from unstable soils and changing patterns of erosion.

The sites discussed herein provide a reasonable basis for evaluating separate facilities for each community. Other sites could have been selected, each with advantages and disadvantages. For example, a site close to the Woodmoor golf course could have been selected in order to easily utilize the treated effluent for golf course irrigation. The major disadvantage is that to serve the portion of the district at lower elevations, a lift station and force main would be required to deliver the untreated wastes to the treatment facility. The bankruptcy of the Woodmoor Corporation, however, would make this an unlikely alternative.

(5) Sub-area Service - 2 Separate Facilities

Also within Service Area 1, service utilizing only two treatment facilities was considered. The Palmer Lake District would utilize Site 4 and provide treatment service for itself, and the Monument and Woodmoor service areas would be combined and treatment service provided at the existing Monument lagoon (Site 1).

(6) Conclusions Regarding Sub-area Service

While sub-area service as discussed herein has a distinct advantage in that each district would control its own treatment facility, taps, etc., the disadvantages outweigh the advantage.

From an economic and environmental point of view, it is generally desirable to have a common, or regional treatment facility within a given region as opposed to multiple treatment facilities. It is the policy of the Environmental Protection Agency to encourage regionalization of facilities where possible and feasible. If at all possible, flow to the treatment facility should be by gravity rather than pumping, which from an operational standpoint is undesirable. Utilization of Site 4 by Palmer Lake would require pumping. Site 5 which would be used by the Woodmoor District is undesirable from a soils standpoint, but suitable from the standpoint of providing gravity service to the district. Site 1, from a service standpoint only, would be acceptable as a site for combined treatment of the sewage from Monument and Woodmoor, but would still result in an additional facility at Site 4 for Palmer Lake.

Sub-area service alternatives are therefore rejected for the reasons set forth above. Rejection of sub-area service alternatives, however, does not eliminate further consideration of Site 1 for combined treatment of the wastes of the three districts.

(7) Selected Service Area

Service areas utilizing sub-areas and multiple facilities can reasonably be eliminated at this point in the environmental statement process. The third service area, utilizing Site 3, has been previously rejected as being inconsistent with land use policies and zoning for the area.

The most logical service areas for the project are therefore Service Area 1 utilizing Site 1 and Service Area 2, utilizing Site 2. At this point, neither area can be conclusively eliminated and must await a detailed consideration of Sites 1 and 2 later in the environmental statement.

B. DESIGN SIZING OF SEWAGE TREATMENT FACILITY

The design of the proposed facility depends in part on estimates of the future population to be served by the system and the estimated sewage flows generated in the system. The future population trends of the project area were discussed in Section I. If the facility is undersized, population growth will overload the system and lead to inadequate sewage treatment. On the other hand, if the system is oversized, the excess treatment capacity may be a factor in stimulating and accelerating population growth in the area. If growth doesn't occur, the excess capacity of the facility is unnecessary.

The design of a sewage treatment facility is generally based on a time period such as ten to twenty years. This permits flexibility to utilize new technological developments as they come along and to upgrade treatment efficiency to meet more stringent water quality standards. It also does not tie up large amounts of capital in unused treatment capacity. The environmental consultant has estimated that with present zoning, the Palmer Lake-Monument-Woodmoor service area (Service Area 1) could accommodate a population of approximately 25,000 persons. Inclusion of the 600 acre serviceable area between treatment sites 1 and 2 could accommodate an additional 4,000-5,000 persons for a total of 29,000 - 30,000 persons in Service Area 2.

The facility should not be sized based on total potential population of Service Area 1 or 2. Oversizing the plant to this extent would require a large capital investment in treatment capacity not needed for a long period of time and it could also aid in stimulating population growth so rapidly that other services in the area such as highways, water systems, and schools would be seriously stressed.

Sizing for the initial population to be served results in a facility at capacity when it goes into service and therefore in need of expansion.

Thus, it is reasonable to size the facility for an interim period and to expand it in phases to serve expanding population. This provides flexibility to utilize innovative treatment methods that are subsequently developed.

The facility proposed for this project is designed to serve a population of 7,000-7,500 persons and to have adequate treatment capacity for a period of approximately 10 years, i.e., until 1984, 1985. The hydraulic capacity of the facility would be adequate for a population of approximately 13,000 persons. The treatment capacity could be expanded about 1984-1985 by means of additional aeration grids to accommodate the additional population.

C. TREATMENT METHOD ALTERNATIVES

Several treatment methods have been considered. For large lot subdivisions such as Pine Hills, and others shown on Figure 2, septic tank treatment of wastes has been judged to be a satisfactory method of treatment. Areas such as these, and the area from the existing Monument lagoon to the Air Force Academy have been zoned for septic tank use. It is doubtful that landowners having a five acre tract in the area would want to be provided service by the district, or even if it would be financially feasible because of the low population density and large lot size.

For the urban and urbanizing areas septic tank treatment of wastes is unacceptable. Therefore, for the Palmer Lake Sanitation District, and the urbanizing areas of Monument and Woodmoor, another alternative is required. Alternative treatment methods include (1) conventional treatment utilizing, for example, the trickling filter process, activated sludge process, or a lagoon system, and (2) advanced waste treatment to remove parameters such as nitrate and phosphate and to provide further removal of BOD and suspended solids. The minimum criteria are to meet water quality standards and to design an effective, flexible, and reliable plant. Agencies such as EPA promote research in the development of new treatment systems, but general experience and good judgement with respect to sewage treatment plant design and operation are key elements in selecting a treatment system. Specific treatment processes that have been evaluated for this project are (1) conventional activated sludge, (2) three-cell aerated lagoon, and (3) advanced waste treatment.

The activated sludge process requires the least amount of area, but is considerably more complex and expensive and more expensive to construct than the aerated lagoon system. Properly operated, however, the activated sludge process will provide an excellent quality effluent. The advanced waste treatment process, likewise will provide a high quality effluent, but present discharge standards of the State of Colorado do not justify this degree of treatment, and it is prohibitively expensive.

The buildings and appurtenant features associated with the mechanical processes, (activated sludge and advanced treatment) even with landscaping, would not necessarily prove to have more aesthetic appeal than a well-designed and landscaped aerated lagoon system.

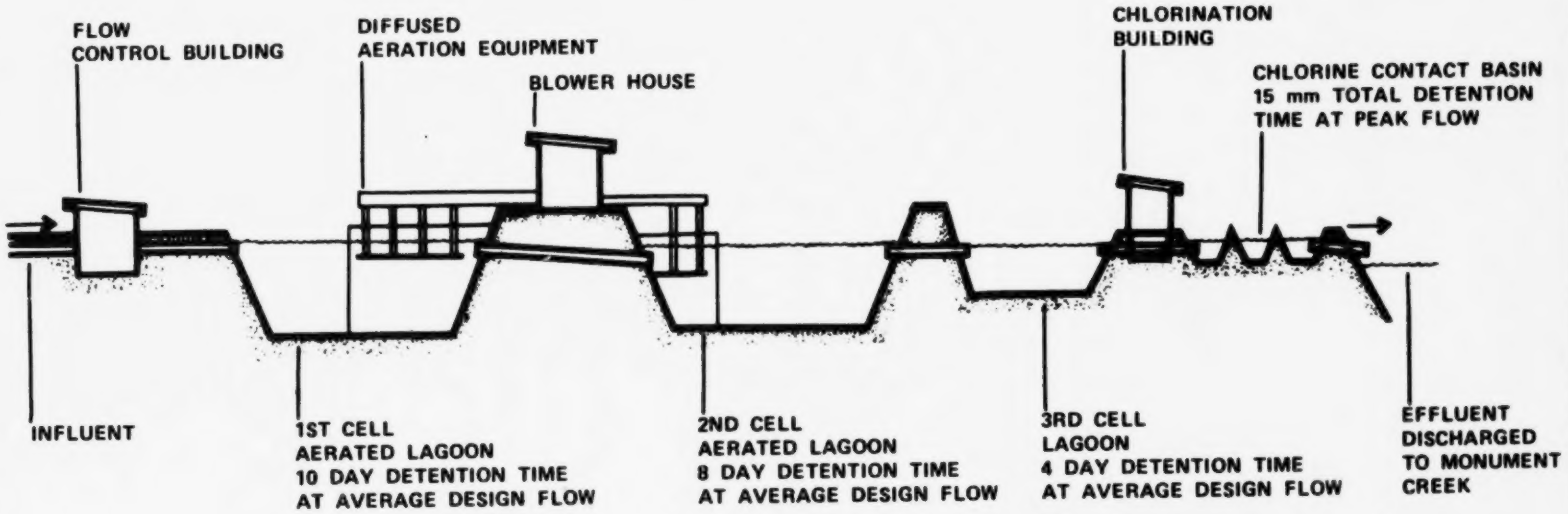
The aerated lagoon system while generally not providing as high a quality effluent as either of the other two systems will provide a satisfactory effluent. On the basis, primarily, of cost and ease of operation, the aerated lagoon system is selected as the treatment method to be utilized. Figure 5 shows a cross-section of the proposed system.

Table 2

Treatment Alternative Costs

	Conventional Activated Sludge Process	Three-Cell Aerated Lagoon	Advanced Waste Treatment
Construction Cost	$ 615,000	$ 400,000	$1,100,000
Contingency	62,000	40,000	110,000
Total Construction Cost	677,000	440,000	1,210,000
Engineering & Legal	102,000	66,000	182,000
Subtotal	$ 779,000	$ 506,000	$1,392,000
Land Required	(7 acres)	(18 acres)	(15 acres)
Land Cost @ 2,500/acre	17,500	45,000	37,500
Total Cost	$ 796,000	$551,000	$1,429,500
Annual Capital Cost*	75,200	52.000	135,000
Annual Operation Maintenance	$ 40,000	25,000	120,000
Total Annual Cost	$ 115,200	77,000	255,000

*20-year amortization @ 7% interest (.09439)


FLOW
CONTROL BUILDING
DIFFUSED
AERATION EQUIPMENT
BLOWER HOUSE
CHLORINATION
BUILDING
CHLORINE CONTACT BASIN
15 mm TOTAL DETENTION
TIME AT PEAK FLOW
INFLUENT
1ST CELL
AERATED LAGOON
10 DAY DETENTION TIME
AT AVERAGE DESIGN FLOW
2ND CELL
AERATED LAGOON
8 DAY DETENTION TIME
AT AVERAGE DESIGN FLOW
3RD CELL
LAGOON
4 DAY DETENTION TIME
AT AVERAGE DESIGN FLOW
EFFLUENT
DISCHARGED
TO MONUMENT
CREEK

PROPOSED LAGOON TREATMENT SYSTEM

FIGURE 5

D. EFFLUENT DISPOSAL

The effluent from the treatment facility may be disposed of in several ways: (1) discharge to stream, (2) discharge to the ground water system for recharge purposes, and (3) irrigation with the effluent.

(1) Effluent Discharge to Stream

In discharging to stream courses it is desirable that the receiving stream be a perennial one, or if this cannot be accomplished, the receiving stream should have a flow for a substantial part of the year. Monument, Beaver, and Hay Creeks are the only streams in the area which flow most of the year. Discharge to either Hay or Beaver Creeks would require a treatment facility near the northern boundary of the Air Force Academy on the west side of Monument Creek. Location of a treatment facility discharging to Monument, Hay, or Beaver Creeks in the area from Site 2 to the northern boundary of the Academy would be clearly inconsistent with land use policies and zoning for the area as the facility would provide pressure for growth at urban densities not called for in planning and zoning. Effluent discharge above Monument Lake from Site 4 is undesirable because of the use of the lake for recreation purposes. Advanced waste treatment could provide a satisfactory effluent for discharge to the lake but this degree of treatment is clearly unjustified for the applicable discharge standards and the cost is prohibitive.

An effluent discharge point between Monument Lake and the existing Monument lagoon (Site 1) offers no advantages. Existing residences north of Site 1, preclude use of this reach of Monument Creek for effluent discharge.

It is concluded that if effluent is discharged to a stream it should be in the reach of Monument Creek from Site 1 to Site 2.

(2) Effluent Discharge to Groundwater System for Recharge Purposes

Groundwater recharge with wastewater effluent is considered impractical for this area. Since the Laramie-Foxhill and Dawson aquifers are the major source of water in the study area, recharge to them could induce an indirect reuse cycle. A high degree of treatment would most likely be required to assure that the groundwater system is not contaminated and a high degree of treatment such as that offered by advanced waste treatment could be required for such an alternative.

(3) Irrigation with Effluent

Irrigation with wastewater effluent is a possibility that has been considered for this project, but no detailed studies have been made. Use of effluent on the Woodmoor golf course has been considered. The available nutrients in the effluent would tend to reduce requirements for fertilizer on the golf course. Detailed soils studies beyond the scope of this environmental statement would be required to determine soil permeability and to assure that no groundwater contamination problems would occur. The recent bankruptcy of the Woodmoor Corporation provides sufficient reason to reject irrigation with effluent as a means of disposal since the golf course belongs to the Corporation.

4. Selection of Effluent Disposal Method

The alternative of effluent disposal to Monument Creek appears to be the most reasonable alternative that can be selected with the stipulation that the point of discharge should be in the reach of stream from Site 1 to Site 2.

E. Sludge Disposal

The proposed lagoon system would have ample depth in the lagoons for accumulation of sludge deposits. The rate of accumulation of sludge deposits would be such that only infrequent removal would be required. It is estimated that sludge removal would not be required more often than once in ten years. This would occur at the end of the initial design period.

Sludge removed from the lagoons would probably have to be disposed of outside the Palmer Lake Sanitation District and combined with municipal refuse for disposal in a sanitary landfill in accordance with State and local regulations.

An alternate method for sludge disposal is to incorporate it into the soil in an agricultural area.

For a period of about 10 years, sludge deposits will adequately be taken care of in the proposed lagoons. When the time for sludge removal approaches, the District will have to take steps to determine the final disposition of the sludge.

F. Treatment Site Location

The principal issue in this environmental statement is treatment site location. Previous discussion under Sections II, B, C, D, and E have established the following:

(1) Sizing and timing of wastewater treatment facility.

(2) Wastewater treatment method.

(3) Effluent disposal method.

(4) Sludge disposal method.

It remains to establish site location and thus determine the service areas for the project. Previous discussion under Section IIA, Service Areas, resulted in the elimination of service areas and sub-areas for all service area alternatives considered, except for Service Areas 1 and 2 which would be served by Sites 1 and 2. See Figure 6 for treatment site alternatives.

The following pages present a discussion of the advantages and disadvantages of Sites 1 and 2 (Alternative A & B, respectively). The advantages and disadvantages of each of the sites are taken from the environmental assessment and in addition, include advantages and disadvantages as determined by EPA. The items followed by an EPA comment are those taken from the assessment.

Site 1 Alternative A) Advantages

1. Site 1 is now a dumping ground which will be difficult to control or eliminate. The project provides an opportunity to clean up a community eyesore.

EPA Comment

The site north of the existing lagoon is now owned by the Palmer Lake Sanitation District, having been purchased in anticipation of using Site 1. Subsequent to preparation of the assessment, Site 1 has been cleaned up by the District.

---

2. Site 1 is somewhat closer to Woodmoor, making it easier to pump effluent to the golf course for land disposal if this proves feasible in the future.

EPA Comment

Concur. However, the bankruptcy of the Woodmoor Corporation casts considerable doubt on irrigation of the golf course with effluent.

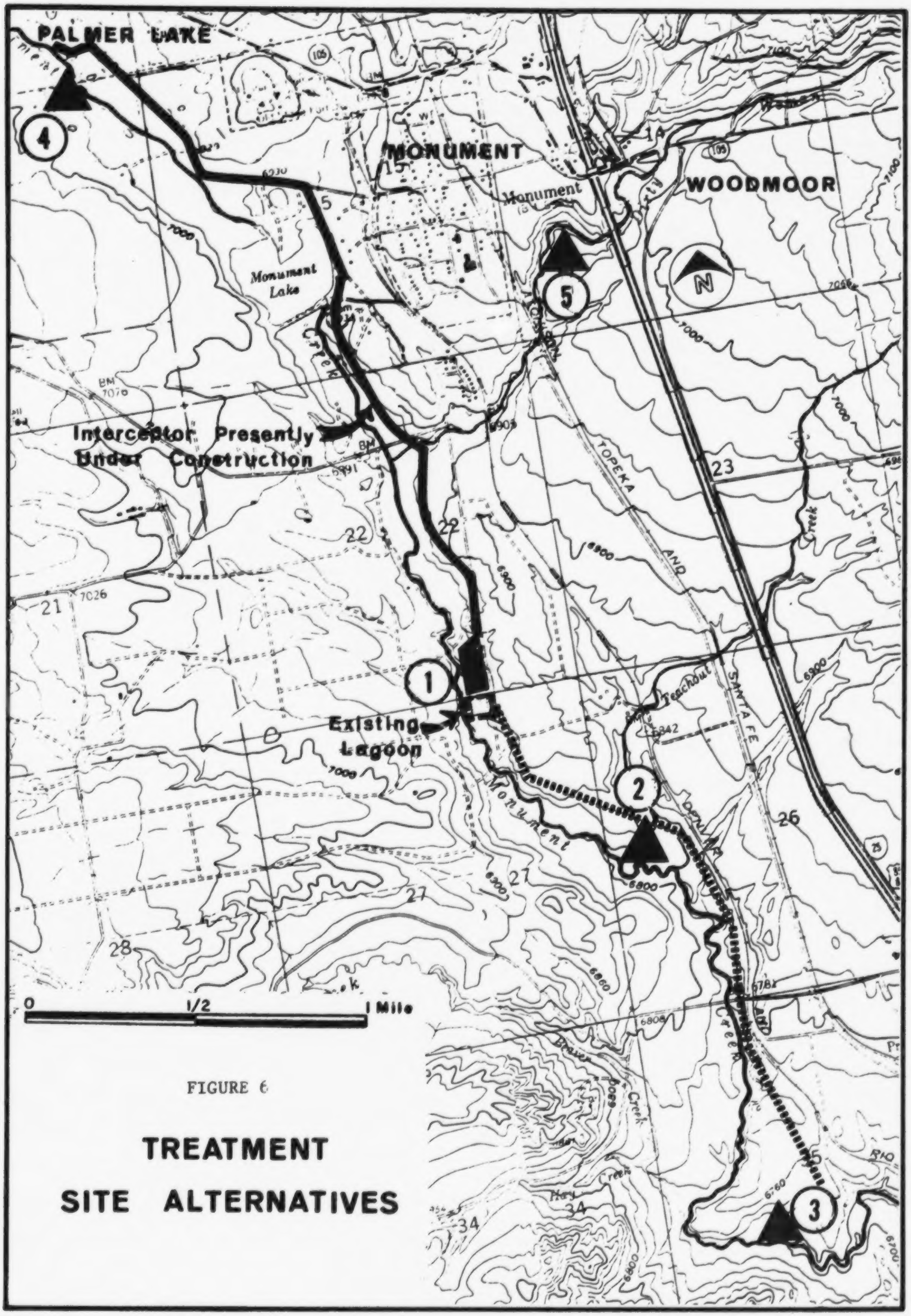

PALMER LAKE
MONUMENT
WOODMOOR
Monument Lake
Monument
N
4
5
1
2
3
Interceptor Presently Under Construction
Existing Lagoon
TOPEKA AND SANTA FE
Monument Creek
Teachout
Beaver Creek
Creek
Hay Creek
0
1/2
1 Mile

FIGURE 6

TREATMENT
SITE ALTERNATIVES

3. The impact of the existing Monument lagoon upon the natural environment already exists. It would be preferable for this impact to continue at its present location than to have it transferred to a place which is now in an undisturbed condition.

EPA Comment

Concur with this point and emphasize that the concurrence is with the impact on the natural environment. However, the difference between impacts on the natural environment at Sites 1 and 2 is considered to be small.

4. The artificially created marsh below existing lagoon has proven to be a beneficial natural habitat which should not be disturbed.

EPA Comment

A field trip to the area by a representative of EPA and representatives of the U.S. Bureau of Sport Fisheries and Wildlife (BSFW) In April 1973 resulted in the BSFW opinion that the marsh would be useful as a resting area for migrating waterfowl and maybe as a breeding area for several pairs of waterfowl each season. They expressed the opinion that if car bodies in the marsh were removed and the quality of effluent improved as proposed by the project, the marsh could prove to be an ecological asset to the area.

Based on the field inspection with BSFW, EPA concluded in its 1973 appraisal of the project that the marsh should be left as is, except for removal of the car bodies, until the project became operational. After a suitable operation period, it was suggested that the situation with respect to odor emanating from the marsh be re-evaluated.

We continue to believe that there is considerable merit in leaving the marsh area undisturbed.

However, as pointed out by Mr. Norman Bodinger in a letter to the Environmental Protection Agency, which was received May 24, 1973, the marsh did not exist prior to establishment of the Monument lagoon. Mr. Bodinger suggested that seepage from the lagoon created the marsh. We agree that seepage could have been a factor in creation of the marsh; however, the effluent could also have been a factor. As stated by Mr. Bodinger, the marsh was created on land owned by him and his associates. We believe that Mr. Bodinger accepted this situation because he in good faith thought the situation would be corrected when the lagoon was moved. Mr. Bodinger also suggested that a marsh generated by an improperly operated sewage disposal facility is unacceptable and to this we agree.

5. Good road access exists directly to the site.

EPA Comment

Concur. There is a decided advantage in utilizing this alternative because of the existing access. All weather access to the treatment site is a requirement.

6. Urban residential densities will be confined more closely to areas designated for development in the land use plan.

EPA Comment

Concur with this statement; however, examination of Figure 4 shows that utilization of Site 2 would not add an unduly large increment of land to that served by Site 1, the additional area being on the order of 600 acres. Approximately 4,000 to 5,000 persons could ultimately be accommodated if zoning permitted.

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7. Future growth and land use planning is uncertain and a pending water quality management plan may establish new schemes for meeting

regional needs. Alternative A (utilizing Site 1 & Service Area) is an economical interim solution which can be abandoned if future needs and plans change.

EPA Comment

Generally concur with this statement. Alternative A, utilizing Site 1 is considerably less expensive than utilizing Site 2 (savings of $235,000).

8. Additional Advantages as Seen by EPA

The District presently owns sufficient land for expansion of the facility at Site 1., having acquired one parcel by purchase and the other by condemnation.

If Site 1 is selected, the delay in construction would be less than for Site 2, as plans and specifications for Site 1 were prepared prior to initiation of litigation. The savings in time, may range from several months to approximately 9 months.

Alternative A: Disadvantages

1. The Pine Hills subdivision overlooks the site. Its developer, lot owners, and those who have built homes feel that the expansion of the original lagoon is an unwarranted and possibly illegal intrusion in a residential area.

EPA Comment

Expansion of the lagoon may be in violation of restrictive covenants attached to the land when originally platted. However, whether the convenants can be enforced against the district is not clear. The Colorado Supreme Court has indicated that such covenants are not operative against the district where condemnation proceedings are concerned. No Colorado authority could be found concerning the validity of such covenants where a district purchased land subject thereto.

2. The appearance and possible noise and odor of treatment facility will be objectionable to existing homes nearby.

EPA Comment

Our calculations show that the unmuffled noise level from the blower would be in excess of the State established level of 50 dbA for residential areas (7:00 p.m. to 7:00 a.m.) The estimated level is 51 dbA at 3200 feet. Noise suppression would be required.

It is our opinion that the appearance of the facility would not be objectionable with proper landscaping. What is apparently objectionable is the fact that the facility would be for the treatment of sewage.

Odor should not be a problem with a facility at this site. The State of Colorado has a mandatory certification program for wastewater treatment plant operators to assure competency in operation of these facilities.

3. Site 1 has a known flood hazard. Due to uncertainties concerning future flood levels, possibility exists the lagoon could wash out.

EPA Comment

The existing lagoon washed out previously and was reconstructed. The facility is designed for protection of flows to 20,000 cubic feet per second based on discussions by the consulting engineer with the Corps of Engineers. A flood such as this may occur in any year and even in successive years. Gabion drop structures are proposed for construction in Monument Creek to reduce stream bed slope to subcritical to reduce streamflow velocity through the area of the treatment facility.

Given a sufficiently long period of hydrologic record, floods larger than 20,000 cubic feet per second will occur. However, it is impossible to predict when this would happen. The degree of protection being provided is adequate in our judgment.

4. The size of Site 1 is restricted by topography and Monument Creek. Its capability for expansion to meet future population growth needs is therefore limited. The capability of the plant to meet standards beyond its initial 7,000 population design is also questionable. Because the investment in the existing lagoon is not great, abandonment now would represent a smaller loss than after expansion had taken place.

EPA Comment

Site 1 is somewhat restricted in size, as compared to Site 2. It is possible that the aerated lagoon system could be abandoned in the future in favor of a mechanical plant utilizing less space and providing a higher degree of treatment in the event of more restrictive standards or inability of an expanded lagoon to meet standards. There would, however, be considerable difficulty associated with maintaining treatment and constructing the mechanical plant at the same time.

We concur in the statement that abandonment now represents a smaller loss than would abandonment after expansion.

---

5. Expansion of lagoon will tend to make the facility permanent. A major investment now will make future abandonment difficult and less likely.

EPA Comment

We generally concur with this statement. In all likelihood expansion of the facility at Site 1 would make abandonment difficult for at least an 8 to 10 year period, the treatment design life of the initial facility. The hydraulic capacity included in the initial construction would be adequate for more than 8 to 10 years and would also be a factor to consider in abandonment.

Alternative B: Advantages

1. At Site 2 sufficient land is available for future expansion, flexibility in plant design and alterations, and for buffers around facility. The location is therefore suitable for both interim and long-term needs.

EPA Comment

Concur, assuming that the site is satisfactory from an engineering standpoint. We conclude from what knowledge is available for Site 2, that it could probably be made to work satisfactorily. Information presented at the public hearing indicates the probability of encountering chemical sands at Site 2, which would increase the cost above that shown in the EIS for Site 2.

2. Site can be sufficiently removed from Monument Creek to minimize flood problems and disturbance to stream.

EPA Comment

Concur.

3. Little existing platting or dwellings in vicinity of site. Initial residential impact can be minimized.

EPA Comment

Concur that the initial residential impact would be minimized; the same situation as now exists at the present facility could arise if sufficient steps were not taken by local authorities to provide for a buffer zone. However, persons locating in the vicinity of Site 2 would do so with the knowledge of an existing treatment facility. It is concluded from the public hearing that there is little chance of establishing a buffer zone around Site 2.

4. Location at mouth of Teachout Creek will make possible the servicing of some 600 additional acres for residential development in south Monument and Woodmoor areas, and elimination of a pump station on Higbee road.

EPA Comment

We do not see additional service area as a significant advantage of Site 2, though from some viewpoints it may be so considered. Elimination of a pump station would be beneficial.

Alternative B: Disadvantages

1. No access exists to Site 2. New road must be acquired and built.

EPA Comment

Concur.

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2. Additional cost to project for removal of old lagoon and restoration of Monument Creek at Site 1.

EPA Comment

Selection of Site 2 does not guarantee removal of the existing lagoon at Site 1. Should the Monument Sanitation District, owner of the present lagoon, choose to bear the expense of upgrading the existing lagoon to meet State discharge standards, there is apparently no mechanism for requiring the District to join with the Palmer Lake Sanitation District at Site 2.

At the public hearing the Monument Sanitation District stated categorically that it would withdraw from the agreement with the other Districts should Site 2 be chosen.

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3. Facility will induce residential development in vicinity. These residents will experience impact. Facility will be visible from many lots in Pine Hills and in prominent view from potential residential land which overlooks site from other side of Monument Creek.

EPA Comment

Residential development is not necessarily a disadvantage of this site but could be in the absence of adequate controls on development. The facility at Site 2 would be visible from many lots in Pine Hills; however, location at Site 2 would result in the facility being farther from existing residences than the present lagoon. Also the distance to Site 2 from future residences constructed in Pine Hills would be greater than the distance from existing residences to Site 1. Therefore, it appears that from the standpoint of Pine Hills residents that Site 2 is the preferable location. From the standpoint of Monument, Site 2 may be slightly preferable, as the extreme southern portion of the community is only about 1/4 mile from the existing lagoon.

As shown on Figure 7, a potential residential area on the west side of Monument Creek overlooks Site 2. However, construction of the facility at Site 2 would not affect an area that is presently residential.

The concentric circles on Figure 7, at 1/4 and 1/2 mile radii have as their center, the approximate center of the sewage treatment facility which is some 800 feet in length. Thus, if distances are measured from the boundary of the facility, several additional residences would fall within the 1/4 and 1/2 mile distances.

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4. If land use plans change to allow urban development south to the Air Force Academy, Site 2 will be unsatisfactory because not low enough on Monument Creek.

EPA Comment

This is true; however, Site 1 has the same disadvantage.

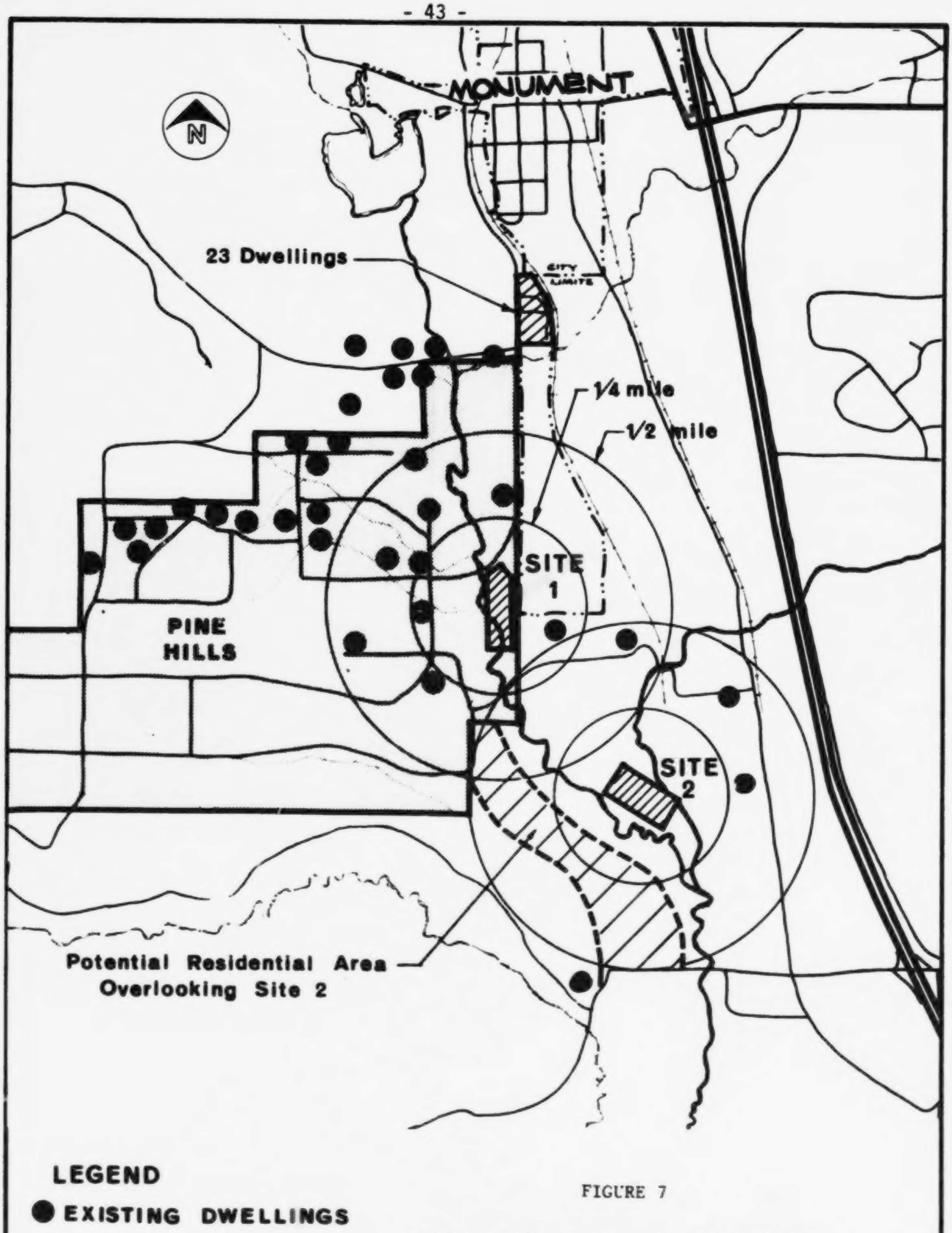
MONUMENT
N
23 Dwellings
CITY LIMITS
1/4 mile
1/2 mile
SITE 1
SITE 2
PINE HILLS
Potential Residential Area Overlooking Site 2
LEGEND
● EXISTING DWELLINGS

FIGURE 7

RESIDENTIAL IMPACT
SITE 1 & SITE 2

5. Area is in natural habitat in relatively undisturbed condition. Facility would upset this and induce development in area, further reducing habitat.

EPA Comment

Concur.

6. Alternative B is a new facility whose costs must be shared by Palmer Lake with Monument and Woodmoor, since the old Monument lagoon would be abandoned. Overcoming the financial and political difficulties would further delay realization of the project, and failure to reach agreement could result in separate, more expensive facilities. Delays are critical because of health risk of Palmer Lake septic tank failure and overloaded Monument lagoon.

EPA Comment

See response to disadvantage No. 2 under Alternative B regarding cost sharing and abandonment of existing lagoon.

Selection of Site 2 would result in the need for new financial and political agreements and would undoubtedly delay construction of the treatment facility until the 1975 construction season; however, it is possible,perhaps likely, that expansion of the existing lagoon could also be delayed until 1975. Health risks would continue.

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7. Site 2 has not been investigated for construction feasibility. Time required for engineering, design, land acquisition, and new funding arrangements would also delay project and increase costs.

EPA Comments

Concur. Construction of the project would be delayed until the 1975 construction season. However, it is possible that construction at Site 1 could also be delayed until 1975.

8. Alternate B is estimated to cost $723,000 which is nearly 50% more than Alternative A, $488,000. The local costs are estimated to be $214,000 which is approximately 60% greater than for Alternative A, $135,000.

EPA Comment

The additional costs for Alternate B are a disadvantage.

The selection of treatment site location is made in Section VI after discussion of the environmental impacts of alternatives considered in the final selection process.

G. No Action

The no action alternative was not seriously considered as it would perpetuate the following unsatisfactory conditions:

1. Inadequately treated sewage resulting from septic tank system failures in the community of Palmer Lake.

2. Inadequately treated sewage resulting from the existing overloaded Monument lagoon.

III. DESCRIPTION OF WASTEWATER TREATMENT FACILITIES CONSIDERED IN FINAL SELECTION PROCESS FOR PROPOSED PROJECT.

The treatment system alternatives considered in the final selection process consist of Alternative A which utilizes Site 1 (existing Monument lagoon) and Alternative B which would utilize Site 2 about one-half mile downstream from Site 1.

In the description that follows, features common to both alternatives are discussed together.

A. Collection System. The collection system which presently exists would be the same for both alternatives. Wastes generated within the Districts would be collected for conveyance by the interceptor to the site of the treatment facility. The collection systems are presently in place and are not a part of the project to be proposed.

B. Interceptor. Both alternatives would utilize approximately 21,000 feet of interceptor that has already been constructed as part of this project. The interceptor now constructed generally parallels Monument Creek for a distance of about 4 miles, running from the southeast corner of the community of Palmer Lake in a southeasterly direction to the existing Monument lagoon.

If Site 2 were selected the existing interceptor would be extended from Site 1 approximately 3500 feet in a southeasterly direction along Monument Creek to Site 2.

C. Treatment Facility. The same type of treatment facility would be used regardless of whether Site 1 or Site 2 is selected. The proposed treatment system consists of a 3-cell aerated lagoon facility. The first cell would have a normal depth of 14 feet and a detention time of 10 days at design flow. The second cell would have a detention time of 8 days at design flow, and the polishing pond about 4 days retention.

For Site 1, only two new cells would have to be constructed as the existing Monument lagoon would be rehabilitated to serve as a polishing area. A chlorination facility for disinfection of effluent would be installed at the downstream end of the polishing cell. The two new cells would be constructed between the existing lagoon and Arnold Avenue, a gravel road which is the main thoroughfare leading to the Pine Hills subdivision (for facility layout, see Figure 8). Within topographic constraints of the site, the two additional cells have been laid out in other than the rectangular or square shape characteristic of sewage treatment lagoons. To the extent possible, the facility has been designed to avoid disturbance of existing trees and other natural features. Landscaping of the site would be undertaken after completion of construction activities. The grant offer of February 7, 1973 made landscaping a condition of the grant.

Landscaping items would not be included as a part of the initial contract for construction of the facility. It is believed most of the general contractors that would undertake construction of the facility would not be equipped for landscaping activities and would subcontract the work to others. Consequently, the feeling is that the landscaping would be undertaken by separate contract.

The stream side of the treatment facility would be riprapped to protect against erosion by Monument Creek. Because of topographic restrictions at the site, about 800 feet of stream channel would have to be realigned to accommodate the facility, and modified to accommodate flood flows. Gabion drop structures would be considered in Monument Creek in the vicinity of the facility to reduce stream bed slope to subcritical to reduce stream velocity.

Site 1 is located in the floodplain of Monument Creek as evidenced by the fact that the existing Monument lagoon was severely damaged during a major flood in 1965. Flood protection for the proposed additional lagoons would be provided for flows up to 20,000 cubic feet per second. Discussions between the Corps of Engineers, the project consulting engineer and EPA established that figure as a reasonable discharge for which flood protection should be provided.

The intrusion of the facility in the floodplain will not add to upstream flooding as the backwater effects caused by the road and bridge immediately upstream are the overriding factor in backwater determinations.

During a 100-year flood, the existing lagoon would be inundated, but damage would be expected to be minor due to protection afforded by the new facility and addition of erosion protection along the west bank.

Sewage in the third cell would be of high quality and would add insignificant pollution to floodwaters. With damage expected to be minor, adequate treatment could still be provided while repairs were made.

The treatment facility would occupy about 15 acres.

Site 2 is located on the east side of Monument Creek about one-half mile downstream from site 1 and near the confluence of Monument and

Teachout Creeks. Detailed engineering studies have not been made at this site. About 18 acres would be needed for the facility and the design would be the same as for Site 1. Topographic considerations could result in a pond configuration different than for a facility at Site 1, but the non-rectangular layout could probably be retained. The third, or polishing cell, could also be designed to avoid a rectangular or block shape. The flooding potential at Site 2 is less than that at Site 1.

Costs for flood protection are included in the cost estimate as the facility could probably be located at an elevation that would minimize flood problems. However, the consulting engineer is of the opinion that there is a high probability of encountering cemental sands at Site 2, which would result in significant additional costs.

The facility at either site would be designed initially for a population of 7,000 - 7,500 persons, but would have a hydraulic capacity for 13,000 persons, allowing future expansion.

D. Effluent Disposal. For both sites, effluent would be discharged to Monument Creek subsequent to chlorination. At Site 1, the effluent would flow a short distance through the existing marsh prior to entering the creek.

E. Sludge Disposal. Lagoon cells for both sites 1 and 2 would be deep enough for adequate sludge storage and digestion. It is estimated that sludge would not have to be removed more often than once in ten years. At that time, the ultimate disposal would have to be in accord with State and local requirements.

IV. ENVIRONMENTAL IMPACTS OF ALTERNATIVE A (Site 1) AND ALTERNATIVE B (Site 2)

The environmental impacts of Alternatives A and B would be similar in many instances, e.g., water quality impacts, impacts of sludge handling and disposal, and impacts of sewers. They differ principally in their impacts on the human environment (appearance, odor, property values, etc.), and in cost

A. Water Quality. Implementation of either alternative would have a similar beneficial effect on water quality in Monument Creek. Treatment at each site would provide the degree of treatment required to meet discharge standards and would allow elimination of inadequate septic tanks in Palmer Lake.

The present discharge standards for which municipal permits are being written are shown below.

Parameter	Standard
Suspended Solids mg/l	30 (monthly average) 45 (weekly average)
BOD mg/l	30 (monthly average) 45 (weekly average)
pH	6.0 - 9.0
Fecal Coliform	200 (monthly average) 400 (weekly average)
Residual Chlorine, mg/l	0.5 maximum
Oil and Grease mg/l	Not greater than 10 mg/l and no visible sheen

Monument Creek is classified B_1. For class B_1 streams, bacteriological concentrations do not exceed a geometric mean of 10,000 total coliform groups or 1,000 fecal coliform groups per 100 millileters based on a minimum of not less than five samples obtained during separate 24-hour periods for any 30-day period, nor do 10 percent of the fecal coliform samples exceed 2,000 groups per 100 millileters during any 30-day period. Steam dissolved oxygen concentration is not to be less than 6 mg/l.

The Palmer Lake Sanitation District has applied to the Environmental Protection Agency for a wastewater discharge permit. When this permit is issued, it will be conditioned to comply with discharge standards in effect at that time.

Monument Creek presently supports a poor quality warm-water fishery with the major species consisting of the white sucker (Catosfomus Comersoni). An improved effluent would not adversely affect the fishery.

Construction of the facility at either location would result in some siltation of Monument Creek. The siltation effect at Site 1, the existing lagoon, would be greater as about 800 feet of channel change is required at this site to accommodate the facility. The effects at each site would be temporary.

B. Impacts of Sludge Disposal. Previous sections have discussed sludge disposal. For the design life of the facility (either location) sludge would be stored in the lagoons and then removed and disposed of in accordance with State and local requirements.

C. Impacts of Sewers.

(1) Direct Impacts. The direct impacts associated with contruction of the interceptor associated with Site 1 have already occurred as the interceptor has been installed. Impacts included noise and dust associated with construction, some disruption of traffic, and disturbance of vegetation. These impacts are adverse, but are temporary.

A direct, beneficial impact of the installation of the sewer system is the elimination of the surface pollution resulting from septic tank failures in Palmer Lake.

The direct sewer impacts associated with Site 2 include those discussed above and, in addition, there would be the same types of impacts associated with extension of the interceptor approximately 3500 feet to Site 2.

(2) Indirect or Secondary Impacts. The construction of the project would permit a greater density and concentration of urban residential development in the area and is designed to accommodate the estimated population that would occur 8-10 years hence. The facility has an initial capacity to serve about 7000-7500 persons and initially would actually serve about 2600 persons.

It is estimated that the Palmer Lake-Monument-Woodmoor service area above Site 1 could accommodate on the order of 25,000 persons based on platted lots and problable development densities. Inclusion of the 600 acre area south of Site 2 could accommodate an additional 4,000 to 5,000 persons.

Location of the facility at Site 1 would not encourage development inconsistent with land use policies and zoning supported by El Paso County and the Pikes Peak Area Council of Governments. Location of the facility at Site 2 would be inconsistent with land use policies and zoning but not to a significant degree. The facility would have the same design capacity at either location, i.e., 7,000 - 7,500 persons. A possible effect of locating at Site 2 is that a portion of future growth would be dispersed to the additional 600 acre increment of land that could be served at this site.

The overall judgment is that secondary impacts resulting from the project would be substantially the same, regardless of whether Site 1 or Site 2 is chosen.

D. Historic Places. A review of the National Register of Historic places (Federal Register, February 19, 1974 and supplements) showed that no sites on the register would be affected by construction of the project.

The Colorado State Historical Society was contacted for information regarding historic sites in the area and the Society's comments are included in Section X. The following sites of historic interest were listed by the Society.

1. Palmer Trails-series of 10 around Front Range & Colorado Springs
   T.12S T.14S
   R.67W R. 68W
2. Monument Nursery 39 degrees 05'
   104 degrees 56'
3. McShane's Ft. - on Michell Richardson Ranch, 2 Mi. from center of Palmer Lake & 1 Mi. from Monument.
4. Columbine Park-south section of Palmer Lake town limits
5. Murat House-Glenarm & Highland Road, Palmer Lake
6. Estemere-Glenside Rd. & Glenway, Palmer Lake
7. McIntyre House-Glenside Road, Palmer Lake
8. Butterfield Overland Dispatch-Smokey Hill Trail
9. D & RGW Railroad-Colorado Midland Railroad

10. Goodnight Cattle Trail-Indian Paint Mines at Calhan

11. Spring Valley Cemetery - east of Monument.

12. Teachout Ranch-Woodman Valley & I 25

13. Van Briggle Memorial Pottery-Monument Park

As nearly as can be ascertained, construction of the project would not adversely affect any of these sites. However as the area served by the Districts increases in population, it seems possible that some adverse effects could occur. The Palmer Lake Sanitation District will be encouraged to work closely with the Society in determining whether future extension of sewer service would adversely affect sites on the National Register of Historic Places, or any sites eligible for listing on the register.

E. Archaeological Resources. The Colorado State Archaeologist was contacted regarding archaeological resources in the project area. There are no known resources in the area; however, this stems mainly from a lack of data as no comprehensive archaeolgical site inventories have been made. Since the Long expedition of 1820 passed through the area, the possibility of archaeological remnants being in the area seems reasonable.

An archaeological reconnaissance of the area would be required prior to construction. In the event artifacts were discovered during construction, work would be stopped and the proper authorities contacted.

F. Natural and Biological. The existing Monument Creek channel would be altered due to site limitations if Site 1 is selected. About 800 feet of channel excavation would be required on the west bank of the Creek. Some siltation of the creek could be expected during channel modification but efforts would be made to minimize this. The siltation effects would be temporary.

Construction of the lagoons of either site would involve considerable excavation and earth moving and the area exposed would be more susceptible to erosion than undisturbed areas. Some blowing dust and siltation could be expected until construction was completed and the lagoon site seeded and a new growth of vegetation established.

The overall disturbance at Site 1 would be less than at Site 2 as Site 1 was previously disturbed during construction of the existing lagoon, and less additional area would be disturbed as only 2 additional cells involving a total of about 10 acres would be disturbed. Utilization of Site 2 would necessitate disturbance of approximately 15-18 acres in an area presently in a near natural state. Construction of an access road to Site 2 would disturb additional area.

Construction of the facility at either site would result in permanent displacement of some wildlife.

At Site 1, several acres of habitat was permanently destroyed with the construction of the existing Monument lagoon. Construction of the proposed facility at Site 1 would permanently eliminate about ten acres of additional habitat. However, this ten acres has already been somewhat disturbed by the removal of junked autos which occupied the site.

Construction of the facility at Site 2 would permanently destroy about 15 to 18 acres of habitat in a relatively undisturbed area.

From the standpoint of the ecology of the Monument Creek floodplain, Site 1 is preferable because the least amount of habitat would be destroyed.

The ecological study concluded that the south portions of the study area probably do not support a large mammal fauna because of area restrictions, and lack of soil and vegetation types. It is concluded that even though construction at either site would result in some permanent displacement of wildlife, the effects would not be significant.

The operation of the facility should result in an improvement in the aquatic environment since inadequately treated sewage would no longer be discharged to Monument Creek.

G. Impacts on the Human Environment. The most important impacts of the proposed project are those which impact the human environment. These impacts will be discussed from the standpoints of (1) those being served by the facility and (2) those impacted by the location of the facility. Siting is the main issue in this environmental statement.

From the standpoint of the Palmer Lake and Monument Sanitation Districts and the Woodmoor Water and Sanitation District, the impact on the human environment is decidedly beneficial. Scattered throughout Palmer Lake are a number of homes with severe septic tank problems. In several locations, water seeping from roadside cuts has a definite sewage odor. At the Baptist camp construction of a pond had to cease because of the surfacing of septic tank effluent. The citizens of the community of Palmer Lake would benefit immediately by elimination of inadequate septic tank systems which pose a health hazard.

Monument and Woodmoor citizens would benefit by having a treatment system that would adequately treat the wastes of these communities, and provision of adequate sewer service could aid these communities in attracting light industry to the area which could provide jobs for local citizens.

By virtue of the fact that they would be considerable distance from the facility, the residents of these communities would experience practically none of the adverse impacts associated with operation and maintenance of the project, regardless of the site chosen.

ALTERNATIVE A

(1) Residential Impact

There are three existing residences within 1/4 mile of the approximate center of Site 1. See Figure 7. Within one-half mile radius of the center of Site 1 are 10 existing dwellings.

If distances are measured from the boundary of a facility at Site 1, then six residences would be within 1/4 mile, with a total of 10 residences within 1/2 mile. There was much discussion at the public hearing regarding the inaccuracy of Figure 7 and a revised Figure 7 was presented as evidence of the inaccuracies. Examination of the figure submitted reveals that within the 1/4 and 1/2 mile radii shown, only the location of one residence could be labeled as grossly inaccurate. This has been corrected in the final statement. A residence that would be within 1/2 mile of some portion of a facility at Site 2 has also been shown.

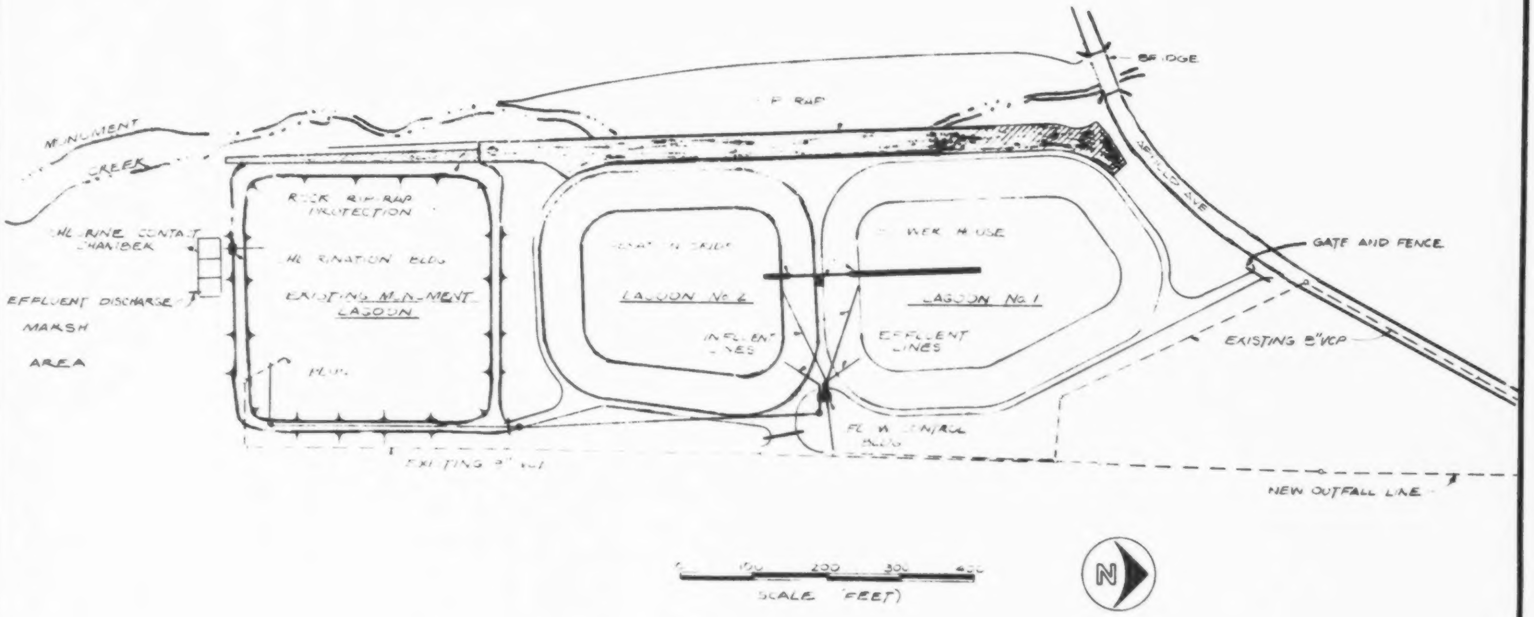
Despite the fact that beyond the 1/2 mile radius some of the residences are apparently mislocated and some are not shown, the map is sufficiently accurate for a determination of residential impact. Between 1/4 and 1/2 mile, the impact of a facility at either site is considered insignificant.

The fact that persons who live within a 1/2 mile radius of a sewage treatment facility pass the facility in the way to their residences does not connotate a significant impact.

There is no set rule on how far a sewage treatment facility should be from a residence. As a general guide, 1000 feet to 1/4 mile is probably reasonable. Thus, within 1/4 mile of some portion of an expanded facility at Site 1, six residences could be said to be impacted. All of these residences were constructed subsequent to completion of the lagoon; however, the record is reasonably clear that purchasers of homesites prior to construction of the lagoon expected the area to be residential as indicated by the protective covenants for Pine Hills. Just over 1/4 mile to the southwest of the existing lagoon is a residence on top of a ridge which overlooks the site. The existing lagoon is clearly visible from the residence and would be more obvious if Site 1 is selected. About 500 feet east of the existing lagoon is a mobile home situated on an area that is some 40 feet higher than the existing lagoon. The roof line of the home is visible from the site.

Approximately twenty-one homesites in the Pine Hills subdivision would be within 1/4 mile of some portion of the expanded lagoon facility at Site 1, however several of these are located in the floodplain. The Silver Hills Plat north of the site would have on the order of half a dozen homesites within 1/4 mile of the site. No residences have yet been constructed in Silver Hills.

Arnold Avenue shown on Figure 8 provides the main access to Pine Hills and residents using this road would pass within 60-70 feet of the expanded facility. As one descends the hill (Arnold Avenue) to cross Monument Creek to Pine Hills, a large portion of the area on which


MONUMENT
CREEK
CHLORINE CONTACT CHAMBER
EFFLUENT DISCHARGE
MARSH
AREA
ROCK RIP-RAP PROTECTION
CHLORINATION BLDG
EXISTING MONUMENT LAGOON
PUMP
RIP RAP
LAGOON No 2
INFLUENT LINES
LAGOON No 1
EFFLUENT LINES
FLOW CONTROL BLDG
EXISTING 8" VCP
BRIDGE
GATE AND FENCE
NEW OUTFALL LINE
N
0
100
200
300
400
SCALE (FEET)

PROPOSED TREATMENT FACILITY
SITE PLAN

FIGURE 8

the expansion would take place is clearly visible. A facility at this location would be visible, though extensive landscaping could mitigate the visual impact of the facility.

Figure 9 indicates sites considered less desirable for residences with Alternative A in place. Residences in the upland area east of Site 1 could be completely out of sight of the facility and odor problems would not be significant with proper operation and maintenance.

(2) Impacts of Odors

Significant odor problems presently exist at certain times of the year in the vicinity of the existing lagoon. It is suspected that many of the objectionable odors originate from the marshy area into which the present lagoon discharges. These odors adversely affect residences in the area, principally the mobile home east of the site, the residence on the ridge overlooking the site, and possibly a relatively new residence immediately west of the site.

The odors are caused by hydrogen sulfide gas (rotten egg odor) produced by anaerobic conditions in the existing lagoon and marsh area. Anaerobic conditions exist when there is insufficient oxygen present to adequately degrade the wastes. Oxygen is introduced into the lagoon through surface contact with the atmosphere and by a compressed air system. The shallow depth of the existing lagoon (5 ft.) prevents adequate oxidation of the wastes. The ice cover over the marsh area during the winter prevents oxygen from reaching the organic wastes. Objectionable hydrogen sulfide gas is trapped under the ice and is released during the early spring when the ice breaks up.

The facility at this site is designed to be operated and maintained to prevent odor problems to the maximum extent possible. The proposed facility consists of two deep ponds (14 ft. deep) which will contain compressed air diffuser equipment for the addition of necessary oxygen to the wastes. Odors will only be a problem if there is equipment failure, if the lagoons ice over or if the treatment facility is inadequately operated and maintained. Extensive monitoring and analysis equipment would be incorporated with the ponds to exactly determine the design parameters for proper operation. The Palmer Lake Sanitation District would be required to submit an operation and maintenance manual for EPA approval before the final Federal grant payment. The District will hire the necessary maintenance personnel to properly operate and maintain the facility.

Aeration equipment in the lagoons to be constructed will prevent icing over in all but the most severe weather conditions. Ice that may form around the edges of the lagoons would not hinder effective operation. The existing lagoon would serve as a polishing pond and since it would not be aerated, may ice over during the winter for a period of three to five months, but continue to operate effectively with the ice cover. During construction of the proposed facilities, the existing lagoon would be rehabilitated.

There would be an odor from the proposed facility. Under normal operating conditions, the hydrogen sulfide odor would not be present. While difficult to describe, the normal odor emanating from this facility will be a sewage odor similar to that produced by a natural non-septic marsh area. Though odor would still be present at times, it would be significantly less than at present with the existing overloaded lagoon and should not prove objectionable.

(3) Visual Impact.

The construction of any facility such as the one proposed would have an aesthetic impact. The aesthetic impact is particularly important in this case because of the proximity of the facility to existing and proposed residential developments. To a degree, personal opinion becomes involved in setting aesthetic standards and evaluations. What may be pleasing or displeasing to one person may not stimulate a favorable or unfavorable response from someone else. Because aesthetics is a matter of individual sensitivities, it would be presumptuous to conclude that a facility at Site 1 would be an aesthetic improvement over existing conditions. However, aesthetics would be a prime consideration in the design and construction of the project. (See visual impact analysis in Appendix F.)

The facility has been designed as best possible to avoid disturbance of the existing trees and other natural features within the area. The ponds have also been created in shapes other than strictly rectangular to avoid the appearance of block units within the area. Extensive landscaping would be a requirement under this alternative.

(4) Noise Impact.

The unmuffled noise level of the blower associated with the aeration equipment is estimated to be 81 dba at 100 feet.

The following tabulation gives an approximation of noise levels at various distances from the blower:

Distance from blower, Ft.	Noise Level, dbA
100	81
200	75
400	69
800	63
1600	57
3200	51

Maximum noise levels established by the State of Colorado for residential areas are 55 dbA from 7:00 a.m. to 7;:00 p.m. and 50 dbA from 7:00 p.m. to 7:00 a.m. Within 3200 feet there are on the order of 18-20 homes which would be impacted by blower noise in excess of the State standard. Therefore, blower noise suppression would be a requirement for Site 1.

ALTERNATIVE B

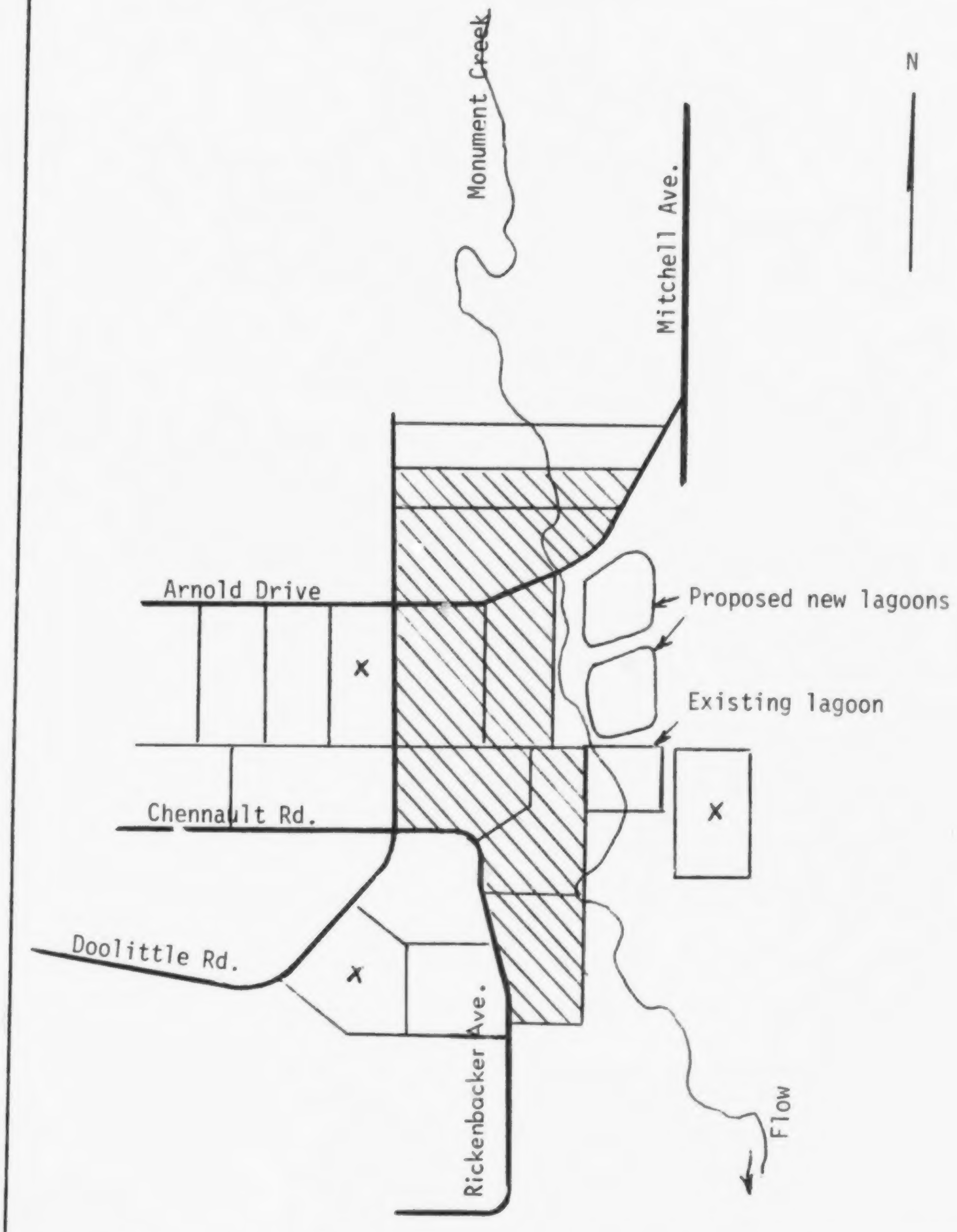
(1) Residential Impact

There are no residences within 1/4 mile of the approximate center of Site 2 and only 3 residences within one-half mile of the center of the site. If distances are measured from the edge of a facility at Site 2, then one residence falls within the 1/4 mile radius, with a total of 5 being within 1/2 mile. Therefore, from the standpoint of the Pine Hills area, the residential impact of using Site 2 would be less than if Site 1 were used. On the west side of Monument Creek is a potential residential area that overlooks Site 2. However, this potential area is as yet unplatted. Should Site 2 be selected and then the area on the opposite side of the Creek developed, those persons purchasing tracts or homes, would do so with the knowledge of an existing sewage treatment facility in the area. Selection of Site 2 would have an indirect residential impact in that an additional area of 600 acres or more would have enhanced development potential. Sufficient open space exists around Site 2 to establish buffer zones to prevent residential encroachment.

With the exception of one residence about 1/4 mile from Site 2, no other residences would be adversely affected as far as residential desirability.

(2) Impacts of Odors.

The same odor potential from the facility exists at Site 2 as at Site 1. In view of the fact that there are no residences within 1/4 mile of Site 2 and only 3 residences within one-half mile, the odor impact on the human environment is judged to be inconsequential if this site is used.


Monument Creek
N
Mitchell Ave.
Arnold Drive
Proposed new lagoons
x
Existing lagoon
Chennault Rd.
x
Doolittle Rd.
x
Rickenbacker Ave.
Flow

Scale: Approx. 1" = 800'
x Indicates residence
▨ Indicates sites considered less desirable for homes if Alternative A is constructed.

PINE HILLS TRACTS IN VICINITY OF SITE 1

FIGURE 9

(3) Visual Impact.

The site would be visible from Interstate 25 just over one-half mile away, but would result in no significant visual impact to passing motorists. From field inspections, it appears that only one residence and possibly two that are not within the Pine Hills subdivision could see the site. From Pine Hills, the site may be visible from the residence located on the ridge about 1/4 mile southwest of the existing lagoon. The site would also be visible from some of the tracts in the southeast corner of Pine Hills but at a distance of one-half mile the sight of the lagoon would not prove objectional. Initial landscaping requirements at this site would probably be minimal as compared to Site 1.

(4) Noise Impacts.

Noise levels emanating from the facility would be the same at either location, but at Site 2 the impact on the human environment would be less than at Site 1 as only four residences are within 3200 feet of Site 2. Noise suppression would also be a requirement at this site.

V. UNAVOIDABLE ADVERSE IMPACTS

A. Alternative A (Site 1, existing Monument Lagoon)

Wastewater treatment at the existing Monument Lagoon would continue at least for a period of 8-10 years, the intrusion into a formerly natural area and one that has been subdivided into 5-acre tracts for homesites. Approximately 21 homesites within a distance of 1/4 mile of some portion of the facility would be adversely affected by the presence of the facility; however, several of these lie within the floodplain.

Use of this site would result in a loss of approximately 15 acres from an open-space corridor (5 acres for present lagoon plus 10 acres for expansion).

There would be an odor associated with operation of the facility, but it is not expected that such an odor would be significant with proper operation and maintenance. The odor associated with an expanded facility at the present lagoon site would be an improvement over the existing situation. The presence of odors however, must be considered as an adverse impact even though they would be minimized.

The presence of an expanded facility at this site would adversely affect six existing homes (5 in Pine Hills, and the mobile residence east of the site).

The existing channel of Monument Creek would have to be altered to accommodate the expanded facility at this site. Approximately 800 feet of channel would be altered by excavation work on the west bank. Some siltation of a temporary nature would occur until construction was completed and the stream stabilized.

The visual impact of the facility would be mitigated by extensive landscaping; however, the mere site of the facility, even if well landscaped, could be considered adverse by some.

Project construction activities would result in some noise and dust during the construction activities and probably some inconvenience to residents using Arnold Drive.

Noise suppression measures would be required to bring the unmuffled aeration blower noise within the 50 dbA allowed by the State of Colorado for residential areas.

B. Alternative B (Site 2)

A wastewater treatment facility at this site would have significantly less impact on Pine Hills residential areas than would use of Site 1. One home is located within 1/4 mile of the site and only 5 within one-half mile. This compares to six homes within 1/4 mile of Site 1 with a total of 10 within one-half mile. Sufficient land is vacant and unplatted in the vicinity of Site 2 to provide a sufficient buffer zone in order to prevent future residential encroachment on the site area. The establishment of such a buffer would have to be accomplished through local authorities.

The odor potential from the facility at this site would be the same as for Site 1, but less persons would be affected and the odor impact at this site is therefore judged to be less adverse than if Site 1 is selected. However, it is emphasized that odor would not be expected to be a problem at either site.

The visual impact and the noise impact of the facility at this site are also judged to be less adverse than of Site 1.

Depending on the route chosen for access to Site 2, the impact of noise and dust during construction would vary, but would be temporary and more of a nuisance than a significant adverse impact.

Selection of Alternative B results in an adverse impact to the residents of the Palmer Lake and Monument Sanitary Districts and the Woodmoor Water and Sanitation District as construction of the facility at this site would result in a delay of from several months to nine months because of the need to re-engineer the project, obtain permission to enter Site 2, and time required for rebidding. In the meantime, Palmer Lake would continue to rely on its system of inadequate septic tanks or would have to tap into the existing Monument lagoon and contribute to the already overloaded lagoon. Because of the existing overload on the lagoon, the State Health Department would undoubtedly deny its permission. Palmer Lake has constructed a collection system (not a part of this project) and over 20,000 feet of interceptor line which is part of the project originally approved by EPA. Without providing treatment, the District has no revenues with which to pay for its share of the project costs.

Approximately 20-23 acres would be taken from the open-space corridor along Monument Creek if Alternative B is used (15-18 acres for plant plus 5 acres for access road).

C. Adverse Impacts Common to both Alternatives

Location of the facility at either site would result in some permanent displacement of wildlife and aquatic biota.

Treated effluent would be discharged to Monument Creek with either alternative, and during periods of low flow would probably constitute most of the flow in the stream. This is an adverse impact, but is more desirable than the present situation with the inadequate lagoon of the Monument Sanitation District. From the standpoint of the stream ecology, Site 1 would be preferable because the adequately treated effluent would provide additional flow in the stream between the sites.

The project at either location would tend to encourage a greater density and concentration of urban development which may be viewed as adverse by some persons and beneficial by others. Location at Site 1 would be consistent with local land use policies and zoning. Location at Site 2 would be inconsistent with policies and zoning but not significantly so. Each alternative would be expected to have similar growth inducing effects. Though Alternative B could provide service to a larger area than Alternative A, the additional area that could be served does not appear to have greater growth inducing effects because (1) additional area is small compared to areas of the three sanitation districts and (2) sufficient rural land outside the districts is platted for residential development and this should serve to moderate the growth inducing effects of Alternative B, and in part, Alternative A also.

VI. SELECTION OF PROPOSED PROJECT

A. Selection

The critical factors in selecting the proposed project are (1) its impact on the human environment and (2) the costs. Impacts on the natural and biological environment are not discounted, and are important, but these impacts are not the most significant or crucial ones in selecting the project being evaluated in this environmental statement.

The most important question to be answered regarding the impact of the selected project on the human environment is: Do the beneficial environmental impacts of expanding the wastewater treatment facility at Site 1 outweigh the adverse impacts of imposing an expanded facility on a residential neighborhood? The severity of the existing water quality problem and the number of persons beneficially affected versus the number adversely affected are important considerations basic to the decision-making process, as are local planning and land use policies.

There are approximately 23 residences within the Pine Hills subdivision with a total population of say, 70 or 80 persons. The project would serve about 2,600 persons initially regardless of which site is chosen and from a long range point of view, the impact on the residents of the three sanitation districts would probably be about the same using either Site 1 or Site 2. The residents of the communities of Palmer Lake and Woodmoor would clearly be far enough from the facility at either site so as not to be able to discern direct impacts of operation and maintenance. From the viewpoint of long range impacts on the Monument community, Site 2 may be slightly more favorable as it is farther removed from the southern boundary of the community.

From a short range point of view, the public health impact on Palmer Lake is decidedly beneficial if Site 1 is chosen, obviating the need for a redesign of the project, resulting in an estimated delay of 270 days. Construction of a facility at Site 1, while having some adverse impact on the Pine Hills area, would not pose a health threat to the residents of that area.

The public hearing established that there is essentially no possibility of obtaining an agreement among the three sanitation districts to utilize Site 2.

The public hearing provided significant information on the financial status of the Palmer Lake Sanitation District and the Woodmoor Water and Sanitation District. Subsequent to the hearing information has been obtained on the financial status of the Monument Sanitation District (see Appendix E for financial status of districts).

The hearing established that the financial position of the Palmer Lake and Woodmoor Districts is precarious, at best. Information submitted by Monument shows a better financial position than either of the other two districts, but essentially no possibility of obtaining a favorable vote on a bond issue.

It is estimated that the additional costs to Palmer Lake to go to Site 2 would require a 1975 mill levy of 33.5 - 37.2 (assuming no revenues).

The estimated mill levy for Site 1 is 32.5 mills, also assuming no revenues in 1975. Based on an assessed valuation of $10,000, a property owner would pay a 1975 tax of $325 to the District if Site 1 is used and $335-372 if Site 2 is used. While the difference between taxes for Site 1 versus Site 2 is small, the estimated mill levies and resulting taxes are exorbitant for both sites. To the estimated taxes must be added monthly service fees of six to twelve dollars.

Selection of either site imposes an extreme financial burden on the Palmer Lake Sanitation District. Site 2 has uncertainties not associated with Site 1, e.g., engineering, the probable need for condemnation resulting in significant delays, the apparent impossibility of obtaining agreement among the affected parties to use the site. The total annual cost for Site 2 is estimated at $93,000 - $113,000, as compared to $71,000 for Site 1. (See financial appendix.)

The District has a current deficit of approximately $45,000 (October 1974) and will require a 26 mill levy to meet debt service requirements in 1975 on present outstanding debt of $570,000. When consideration is given to the substandard bond ratings of the Palmer Lake and Woodmoor Districts, the Palmer Lake family income of approximately $8,000 annually, and the difference in total annual costs between the two sites, the conclusion is that Site 1 is the only site that can be used.

Therefore, it is concluded that Site 1 should be selected as the site for construction of the Palmer Lake Sanitation District wastewater treatment facility.

B. Problems Associated with the Selected Alternative

There are several problems associated with Site 1, as follows:

(1) The existing litigation, Pine Hills, Inc., vs Monument Sanitation District, is still pending in El Paso District Court and must be resolved prior to construction at Site 1. If the litigation is resolved in favor of the District, then construction could proceed; however, condemnation proceedings by the District would be required in Pine Hills, Inc. wins the suit. In any event, the grantee must provide assurance of title, via Title insurance or

Title opinion before any Federal obligation will be incurred under the grant.

(2) The marsh below the existing lagoon has been recognized by the U.S. Bureau of Sport Fisheries and Wildlife as habitat for waterfowl, and the Bureau has suggested that the marsh be left as it is through an initial operating period after project construction. After a suitable operation period, the situation with respect to odors emanating from the marsh would be reevaluated. EPA believes there is considerable merit in leaving the marsh area undisturbed, but recognizes that the marsh is on private land and that it was formed subsequent to the establishment of the Monument lagoon.

The final resolution of the marsh issue is one that will have to be made by the Monument Sanitation District, the Colorado Department of Health, and the landowner.

VII. MITIGATING MEASURES

The following mitigating measures are considered necessary as a result of selecting Site 1 for the proposed treatment facility.

1. The District must develop a sewer use ordinance to control taps in order to prevent the treatment facility from becoming overloaded in the future.

2. From time to time as the District proposes extension of sewer services, consultation should be made with the State Historical Officer to ascertain the effects, if any, of sewer extension on sites listed in the National Register of Historic Places or sites which may be eligible for listing in the register.

3. Noise suppression devices will be required in order to bring the aeration blower noise levels within those established by the State of Colorado for residential areas.

4. Landscaping is required. (See Appendix F - Landscaping for requirements).

5. An archaelogical reconnaissance will be required at Site 1 prior to construction.

VIII. RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY.

1. The proposed system would replace inefficient and inadequate sewage treatment systems with a more reliable system that would protect water quality in the future. Improvements in stream quality achieved by the project would improve long-term conditions for aquatic life and for human recreational use of Monument Creek as an open space corridor, in keeping with area plans.

2. The project constitutes a commitment of the site to waste water treatment purposes for the life of the project.

3. The facility would make possible further intensification of development within the sanitation districts. This would further commit these areas to urban purposes and require a long-term commitment of local units of government to the provision of water and other facilities and services.

4. Encouragement of development in areas served would tend to reduce pressures to develop outlying, open land. This would preserve natural resources and agriculture over the short-term substantially in accordance with land use planning objectives and zoning. Options for best long-term use of these areas would be kept open.

IX. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

1. The project will irretrievably commit power, materials, chemicals, and manpower which are utilized in its construction and operation.

2. Urbanization made possible by the project is expected to irreversibly commit lands to intensive uses. Once subdivided and provided with sewers and other public services, these areas are unlikely to revert to a natural condition or to agricultural use.

3. Approximately 15 acres of land, all of which is in an open space corridor, would be committed to use for wastewater treatment purposes. Five of the 15 acres are the site of the existing Monument lagoon and the proposed project would require about 10 additional acres.

X. PUBLIC PARTICIPATION

A. Public Meetings and Hearings

Planning for the Palmer Lake project goes back to 1969 when studies were prepared for the sewering of Palmer Lake, Monument and Woodmoor. Early efforts in local participation were directed toward obtaining agreement on joint facilities for the three communities. As plans for the area were developed, efforts were made by the Pikes Peak Area Council of Governments to obtain public participation through meetings and hearings in the area.

The project first became somewhat controversial in July 1972 when General Charles Lenfest visited EPA's regional office in Denver to discuss the project and present objections to the location of the proposed expansion at the site of the existing lagoon. At the time of his first contact with EPA, General Lenfest represented about 40 individuals opposed to the project.

In November 1972, EPA conducted a public meeting at Palmer Lake, Colorado to present the project as proposed at that time and to receive citizen input.

Subsequent to the negative declarations of January 1973 and April 1973, Mr. Norman Bodinger twice visited EPA's regional office to discuss the project and the possibility of obtaining an environmental statement on the project. At this time, the construction grant had already been awarded to the Palmer Lake Sanitation District, and the interceptor portion of the project was under construction.

A public hearing on the draft environmental statement was held in the Palmer Lake town hall on the evenings of July 16, 22, and 29, 1974.

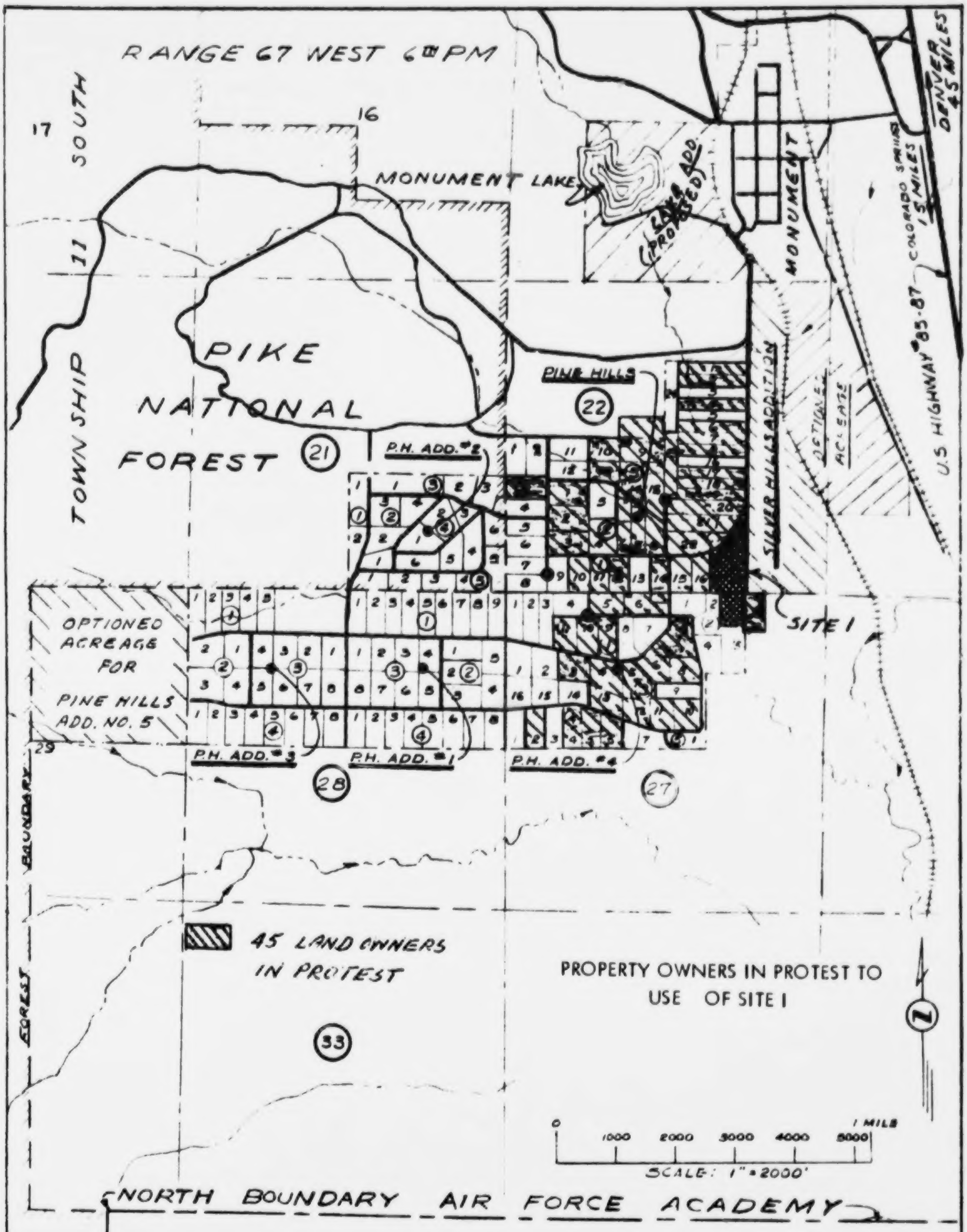
The hearing was well attended with approximately 250 persons present on the first night, 180 the second night, and 125 the third and final night of the hearing.

The overwhelming sentiment of the sector of the public representing Palmer Lake, Monument, and Woodmoor favored using the existing site (Site 1). The following units of government or government agencies favored Site 1: Pikes Peak Area Council of Governments, El Paso County Commission, City of Palmer Lake, Palmer Lake Sanitation District, Monument Sanitation District, Woodmoor Water and Sanitation District, and Colorado Department of Health.

Basic arguments presented in favor of Site 1 were as follows: (1) Site 1 is cost effective, whereas Site 2 is not, (2) Site 1 has already been disturbed, whereas Site 2 has not, (3) Site 2 is beyond the financial capability of the local community, (4) the existing situation with respect to public health requires a solution as soon as possible, by construction at Site 1, and (5) Site 1 is consistent with all local land use policies and plans, whereas Site 2 is not.

General Charles Lenfest represented 45 land owners opposed to the project (see plat map following). Principal arguments advanced in favor of using a site other than Site 1 were as follows: (1) adverse impact on the Pine Hills area if Site 1 is used, including odors and loss of property values, (2) flood hazard at Site 1 and (3) inadequacy of the environmental assessment resulting in a draft statement restricted in its evaluation of reasonable alternatives. Several additional property owners also spoke in favor of a move from Site 1.

Mr. Norman Bodinger, plaintiff in the litigation that led to the preparation of the environmental statement, also testified in favor of using a site other than Site 1. Principal arguments advanced by Mr. Bodinger were: (1) use of Site 1 would constitute visual pollution, (2) imposition of a facility on the Pine Hills would be unfair to persons who owned lots in Pine Hills but could not be present because of being in military service and/or residing in other states, (3) noise impact at Site 1, (4) loss of property values in the vicinity of Site 1 if it is used, and (5) odors at Site 1.


RANGE 67 WEST 6th PM
TOWNSHIP 11 SOUTH
17
16
MONUMENT LAKE
LAKE ADD. (PROPOSED)
MONUMENT
DENVER 45 MILES
COLORADO SPRINGS 15 MILES
U.S. HIGHWAY #85-87
PIKE NATIONAL FOREST
21
PINE HILLS
22
SILVER HILLS ADDITION
OPTIONED ACREAGE
P.H. ADD. #2
SITE 1
OPTIONED ACREAGE FOR PINE HILLS ADD. NO. 5
29
P.H. ADD. #3
P.H. ADD. #1
P.H. ADD. #4
28
27
FOREST BOUNDARY
45 LAND OWNERS IN PROTEST
PROPERTY OWNERS IN PROTEST TO USE OF SITE 1
33
N
0
1000
2000
3000
4000
5000
1 MILE
SCALE: 1" = 2000'
NORTH BOUNDARY AIR FORCE ACADEMY

REV. 1 - 10/5/57 REV. 2 2/2/59 REV. 3 4/6/59

80a

B. COMMENTS RECEIVED AND EPA RESPONSES

PLSD
Ex. 1

BEFORE THE ENVIRONMENTAL PROTECTION AGENCY
REGION VIII

IN RE PUBLIC HEARING ON DRAFT ENVIRONMENTAL STATEMENT PALMER LAKE SANITATION DISTRICT PALMER LAKE, COLORADO PROJECT NO. C 080306	OBJECTIONS OF PALMER LAKE SANITATION DISTRICT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT DATED JUNE, 1974

COMES NOW the Palmer Lake Sanitation District by and through its attorneys, Spurgeon, Aman & Hanes, and respectfully submits the following objections to the Draft Environmental Impact Statement dated June, 1974, with respect to Project No. C 080306.

GENERAL OBJECTIONS

1. In contrast with Rules and Regulations promulgated by the Environmental Protection Agency under the National Environmental Policy Act of 1969, which pertain to the preparation and content of Environmental Impact Statements, the Environmental Impact Statement for Project No. C 080306 (hereinafter referred to as the Statement) is not an objective evaluation of the proposed action and its alternatives in light of all environmental conditions, but rather it is an justification for a predetermined course of action. The analysis contained in the Statement does not evaluate alternatives in such a manner that reviewers independently can judge their relative desireability.

2. The "proposed action" or the "proposed project" is inaccurately and misleadingly described.

3. The conclusions reached are not based on the weight of the evidence as set forth in the body of the Statement.

4. The project objectives are narrowly construed and incompletely listed. Applicable constraints are omitted. These omissions tend to cast the conclusions in a more favorable light.

5. Conclusions are reached with respect to human environmental facts without any evidentary basis in the Statement.

6. The Statement is oriented to the determination of a single issue, site location, with the major emphasis on settlement of existing legal disputes and placating the objections of a vocal minority instead of addressing itself to the issues and analysis required of an Environmental Impact Statement.

SPECIFIC OBJECTIONS

(The Environmental Impact Assessment prepared for Palmer Lake Sanitation District by CH2M HILL Engineers and Planners shall be hereinafter referred to as CH2M)

SUMMARY SHEET

The Summary Sheet misstates and misdescribes the proposed project. The environmental impacts listed in the Summary are incomplete and misleading. For example, paragraph 4 under Environmental Impacts states that the project will "make possible a greater density of urban development, but in general conformance with local land use planning...." The implication that greater density of development is desireable and the fact stating that such is in general conformance with land use planning is false under the definition of the project as set forth in the description of action, i.e., that the project will be one-half mile downstream from the existing Palmer Lake Sanitation District lagoon.

I. Background

A. Proposed Action.

The definition of the proposed project as being at the confluence of Monument Creek and Teachout Creek is not an objective definition of the project, but one which is conclusory and connotes a predetermination at the outset of the Statement.

B. Social and Environmental Setting.

Pages 1 through 8 omit the CH2M conclusion (page 16) on ecology.

C. HYDROLOGY

Omits the CH2M observation on the low quality of Monument Creek water (page 24).

II. PROJECT ALTERNATIVES

Major Objectives.

The project alternatives listed as major objectives omits two out of the four objectives listed by CH2M (page 35), all of which are valid and pertinent. The objectives which are listed in the Statement, specificaly the cost effective, are thereafter ignored in favor of the single consideration, the human environment.

Constraints.

Constraints to the objectives, listed accurately at page 40 of CH2M, are omitted from the Statement: specifically, the policy constraints of PFACG, funding constraints and time constraints. The policy constraint of land use by El Paso County and the PPACG is ignored throughout the Statement or unjustifiably minimized later in the Statement (see pages 21, 50-51, 59 and 64.)

F. Site Location.

On page 31 of the Statement, treatment site location is said to be the principal issue of the Statement. Pinpointing a single issue and slanting the entire body of the Statement toward it is inconsistent with the Rules and Regulations of the Environmental Protection Agency and inconsistent with the "Manual for Preparation of Impact Statements for Waste Water Treatment Works." It appears that two pending lawsuits brought by the principal objectors to the site No. 1 treatment facility have unduly influenced and biased the preparation and presentation of the Statement. (See also page 53 of the Statement where siting is said to be the main issue.)

After a thorough discussion of the alternatives with respect to service areas of the treatment facility (pages 19-24 of the Statement), it is stated on page 32, lines 1 and 2, that the service areas for the project will be determined by the establishment of the site location. It would appear that the more logical and well-reasoned approached would be to first determine the service area.

The comparison of treatment sites (pages 32-44) are weighted heavily in favor of Site No. 1; however, the conclusion reached on page 69 in favor of Site No. 2 is contrary to the undisputed factors and conclusions reached during these comparisons.

IV. Environmental Impacts of Alternative A and Alternative B.

F. Natural and Biological.

The adverse natural and biological impacts (page 53) are ignored in the conclusions reached and are made to appear as advantages elsewhere in the Statement (See 3(3) of the Summary Sheet).

G. Impacts on the Human Environment.

The comparison of Alternatives A and B conclusively show that Alternative A is preferable and yet the conclusion reached on page 69 of the Statement arbitrarily and without factual support recommends Alternative B. For example, the residential impact of Alternative A states facts with respect to the location of residences, but draws no conclusions therefrom. Odors should not prove objectionable (page 57), visual impact is said to be a matter of aesthetics, and it is admitted that extensive landscaping would be done, and that the facility would be designed to avoid disturbance of natural features. The noise impact would be adequately handled by blower noise suppression. The conclusions reached on page 59 (impact on property values) that the site No. 1 project would imply a reduction in property values is absolutely without foundation or support.

VI Selection of Proposed Project

A. Selection

The Statement, in paragraph 2, page 66, concerning the "question to be answered" is contrary to and inconsistent with the major objectives of the project as set forth on page 18 of the Statement. The Statement on page 66 that a delay of the project resulting from a site change is not significant is a statement made without factual basis. There is no identification of a time problem or time constraint in the Statement, much less any analysis of additional time required if Site No. 2 is selected. Without these facts, there can be no conclusion reached "on balance."

On page 67, it is clear that the pending lawsuit in El Paso County for the return of the site of the existing Monument lagoon to Pine Hills, Inc. is a factor which is being considered. Such a factor has no place in the Statement, especially in view of the absence of any kind of opinion as to the possible outcome of such a suit.

The statement on page 67 that the water quality problem is not severe enough to justify imposing an expanded facility at Site No. 1 is inconsistent with the facts and with the analysis contained in other parts of the Statement. Existing water quality is only one of many immediate, severe and health endangering problems which have justified the project.

The statements on page 68 attributed to Norman Bodinger regarding land values are improperly included in the Statement and should be inadmissible as evidence for the reason that Mr. Bodinger has not demonstrated expertise in such matters and as a party plaintiff to both of the aforesaid lawsuits, he is in a position of possible bias.

The conclusion relative to Site No. 2 on page 69 is against the weight of all of the evidence and is a conclusion made on a false assumption, to-wit: that the three sanitation districts would cooperate in the Site 2 facility.

Costs are inadequately considered in the recommendation of Site 2.

The buffer zone referred to on page 70 is indicated to be a requirement of the Site 2 facility; however, no realistic approach for obtaining a buffer zone is apparent in the Statement.

VIII Mitigating Measures

The proposed solution for the timing problem of a Site 2 facility, i.e. that the Palmer Lake Sanitation District should be allowed to tap into the existing Monument lagoon until construction has been completed at Site 2, is impossible of performance.

CONCLUSION

Palmer Lake Sanitation District respectfully submits that the Draft Statement should be reevaluated in view of the objections set forth above and that the recommendations of the CH2M Assessment be given further consideration and be incorporated into the final Impact Statement.

SPURGEON, AMAN & HANES

By Richard W. Hanes
1140 Holly Sugar Building
Colorado Springs, Colorado 80902
632-6641

RESPONSE TO RICHARD HANES

The response to Mr. Hanes is in the order of comments which he submitted.

General Objections

The environmental statement was not prepared to justify a predetermined course of action. The tentative recommendation in the draft was based on information available at the time of preparation. Problems associated with recommendation of Site 2 were fully recognized in the draft statement. Ideally, additional information would have been available, especially that of a financial nature, in the draft EIS process to enable a definitive recommendation in the statement. However, such information was not forthcoming until the public hearing.

In preparing an environmental statement from an environmental assessment, decisions must be made as to what portions of the assessment, if any, will be included in the body of the statement - decisions on which no two persons would probably be in agreement. For this reason, the assessment was made part of the statement (see Foreward), except as noted.

Specific Objections

Summary sheet - The summary does not imply that greater density of development is desirable. Rather, this is an impact regardless of which site is selected for the project. Strictly speaking, the project as proposed in the draft was not in conformance with local land use planning. This was acknowledged in the draft on pages 21, 50, and 70.

I. Background

A. Proposed Action - This section of the statement gives the location of the proposed project and the rest of the statement explains the process by which the decision was made. We do not consider this conclusory or predetermined.

B. Social and Environmental Setting - The CH2M assessment is a part of the statement. A thorough reading of both documents is necessary for a complete understanding of the project.

C. Hydrology - The water quality data between Palmer Lake and Monument Lake - specifically dissolved oxygen 7.0 to 9.3 mg/l, temperature of 30° - 64° F, average BOD of 2.34 mg/l, and maximum BOD of 3.8 mg/l - does not show low quality water. Based on limited data, the assessment attributes the lower quality to surfacing of septic tank discharges. The limited data presented for water quality above Monument Lake is good.

II. Project Alternatives

Major Objectives - To cite item 2, page 35 of CH2M in the development of the draft EIS would have connotated a predetermined course of action.

Constraints - The assessment is part of the environmental statement, therefore the constraints listed by CH2M are to be interpreted as being part of the statement.

F. Site Location - We continue to feel that site location is the principal issue of the environmental statement and that e.g., disturbance of the natural environment is of secondary importance in the case at hand but is not a factor to be excluded in the decision making process. Therefore, emphasis in the draft statement was placed on siting. In regard to the law suits, it was the responsibility of the sanitation districts to bring Pine Hills, Inc. vs Monument Sanitation District to the attention of EPA. This, however, was brought to our attention by Mr. Bodinger in the spring of 1973 long after submission of the grant application by the Palmer Lake Sanitation District. This particular law suit has a significant influence on a project at Site I, for until the suit is resolved, there can be no project at Site I.

Service Areas for both Sites I and 2 would be similar (see Figure 4 in the body of the statement). To categorically state that the only area to be served would be the area encompassing only the three districts biases the selection of treatment site alternatives.

In regard to the comparison of treatment sites, the writer fails to give the criteria he used to determine that the comparison is heavily weighted in favor of Site 1. The CH2M assessment itself does not state the weight given to various factors (social, economic, and environmental) in selecting a site, but rather, "Based upon the factors set forth in this chapter, Alternative A is recommended as most satisfactorily meeting the objectives for the project." The public hearing established the weight given to the factors by CH2M.

Quoting Mr. McKibben of CH2M: "Alternative A will have the lowest impact on the natural environment. The second alternative further downstream will have a slightly higher impact on the natural environment. However, this difference is somewhat small." (Emphasis added)

"Alternative B will have a lower impact on the human environment in terms of people affected by association or close proximity to the treatment plant."

"If economics is the one which has the highest value - and in our particular case, this is where we place probably the greatest value - then this probably dictates going to Site A."

EPA concludes from Mr. McKibben's remarks that economics was given the greatest weight in recommending Site I in the assessment.

As stated by Mr. McKibben, "it really comes down to a decision as to what value you place on the various items analyzed".

In its analysis of the comparison of Sites I and 2, EPA placed a greater weight on the human environment and thus reached a different conclusion than CH2M. The draft statement recognized, however, that economics would undoubtedly be a major factor in any final decision to use Site 2 for the project.

IV. Environmental Impacts of Alternative A and Alternative B

F. Natural and Biological - We disagree with Mr. Hanes' comment. To state that acreage utilized for the treatment facility would be committed for the life of the project (as was done in 3(3) of the summary) does not imply that this commitment is an advantage.

G. Impacts on the Human Environment - See previous comments under site location.

In regard to the comment regarding reduction in property values, it should be stated that the three sanitation districts have provided no evidence to the contrary. Evidence submitted by the Palmer Lake Sanitation District at the hearing, specifically exhibits 8, 9, and 12 do not establish desirability of residential areas adjacent to sewage treatment facilities nor that property values would not be adversely affected. The fact that the residences shown on the exhibits are mobile homes, enables the occupants to move their dwellings in case of poor operation of the treatment facility. This is not the case with the Pine Hills area.

VI. Selection of Proposed Project

A. Selection - Page 66 of the draft statement listed impact on the human environment and cost as the critical factors in site selection.

The "question to be answered" was referenced to impact on the human environment and therefore, is a legitimate one.

The public hearing resulted in statements as to the additional time required to put Site 2 on line and this information has been considered in the recommendation in the final statement.

Consideration of Pine Hills, Inc. vs Monument Sanitation District does have a place in the environmental statement. Until the suit is resolved, e.g. if Pine Hills drops the case, or wins the case and the District subsequently condemns the land, EPA cannot fund the project.

The conclusion and tentative recommendation on page 69 was based on information available at the time of preparation of the draft statement. Significant problems with Site 2 were recognized, e.g. financial considerations. The evidence contained in the environmental assessment and in EPA's files simply did not support conclusively, that Site 1 should be retained. Cooperation among the three sanitation districts in the Site 2 facility appears impossible of attainment.

The draft statement recognized costs as a significant problem. The public hearing provided significant additional cost information.

The draft statement provided little in the way of an approach to establishing a buffer zone. Such a zone was recognized as being desirable. The public hearing provided an insight into local problems involving establishment of a buffer zone and the unlikelihood of one being established should Site 2 be selected.

VIII. Mitigating Measures

The mitigating measure of allowing Palmer Lake to tap into the Monument lagoon until construction at Site 2 could be completed would apparently not be possible.

PLSD
Ex. 2

Palmer Lake Sanitation District

TO:

FROM:

P.O. Box 687
PALMER LAKE
Colo. 80133

July 16, 1974

Mr. John A. Green, Regional Director
Region VIII, Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green: Project No. C 080306

Please enter the following statement into the record of public hearing this date on draft Environmental Impact Statement (EIS) concerning the construction of the Palmer Lake Sanitation District waste water treatment plant:

STATEMENT BY PALMER LAKE SANITATION DISTRICT

Time and money factors used in the development of this statement are taken from the July 9, 1974, letter from Nelson, Haley, Patterson and Quirk (NHPQ). We believe these factors are more realistically stated in the NHPQ than they were in either the Environmental Assessment or the draft EIS, which omitted some very important features of work involved in relocating the site of the waste water treatment facility.

A. Position of the District concerning the tentative recommendation in the EIS: the Palmer Lake Sanitation District is unalterably and violently opposed to relocating the site of the treatment plant to a point downstream from the present Monument lagoon.

1. Why spend a quarter to approximately one-half million dollars in additional tax funds from whatever source for providing the same treatment capacity at a second site?

2. Why disturb ground for the plant, pipe line, access roads and utilities and place a plant in a second location when a first site is already so disturbed?

3. Why destroy the concept of a regional treatment facility toward which all three sanitation districts and local, State and Federal Agencies have been striving since 1970? We have no doubt that if the tentative recommendation in this draft EIS to move the plant downstream becomes a firm recommendation in the final EIS, the Monument District will withdraw from the gentleman's agreement and go it alone. Such action will increase the amount of local contributions required for construction from both Palmer Lake and Woodmoor Districts.

4. Why reverse a position which was adopted in the Negative Declarations of January and April 1973 to expand the Monument facility to serve all three Districts? The publication of the abbreviated Declaration in January was a big factor in our decision to proceed with the sale of our general obligation bonds. The complete Declaration of April 1973, which confirmed the earlier one, was the impetus in our proceeding with construction of the outfall and collection systems and advertising for bids for building the treatment facilities.

5. If final decisions cause Monument District to withdraw from a regional plant in a location other than that which it now occupies, why build a second plant within three-quarters of a mile of the present Monument facility? Furthermore, why should Palmer Lake then be forced to abandon a $14,000 investment in land already purchased to expand the Monument facility? This land is ad-

mittedly in the flood plain of Monument Creek, and about all we could do with it would be to present it to the Park and Recreation Commission. Our dollars are too scarce to sustain such open-handed benevolence.

6. Why not recognize the fact that the same psychological objections to the presence of a waste water treatment facility arises no matter where one is built? Had the expansion of the Monument facility been permitted to proceed on schedule, providing larger and deeper lagoons, adequate aeration, and final chlorination of the effluent, the odors now noticeable around the marsh of the present plant would now be minimized if not eliminated. We are also under instructions to landscape the area. We might note that several new houses within a three-quarter mile radius of the present facility, and all within view of that facility, have been built in Pine Hills in the past year and a half. It also seems there is some hypocrisy in this situation, as no member of the Palmer Lake District Board received any complaints on the fact that its two lots were being used as a dump, which is more offensive to people than is a treatment plant. We cleaned the dump up on our own initiative.

7. We believe the answer to all these whys can be traced to the attempt to solve disputes and placate objectors, and is not based on any reasonable comparison of the available alternatives. We submit that the additional acreage which would be opened up for development if the downstream site is used is considerably more than 600 acres as shown by the land ownership map prepared by Nelson, Haley, Patterson and Quirk. The financial advantage to potential land developers in this additional area should not influence the choice of sites, especially in view of the land use plans already published by the Pikes Peak Area Council of Governments.

B. Financing Problems: It is impossible for the Palmer Lake District to obtain additional loans from commercial sources for the local contribution to construction of the treatment plant and for other necessary materials and operations. The status of the District's credit and bonds will be stated by representatives of our investment and local bankers. Also attached are copies of letters received from them in response to a prior inquiry on the subject. Even if we had not strained the District's bonding capacity with the first issue, in consideration of the history of this project, I do not have the courage or gall to ask the voters of the District to authorize another bond issue.

Our only possible sources of additional funding for the District will be loans or grants from Federal and State agencies involved with water quality control. None of these agencies will commit themselves to any action until this litigation is dismissed or settled.

C. Loss of Revenue. We are losing revenue at the rate of $100 or more per day because we can provide no service with the $650,000 worth of outfall and collection sewer pipe which we have in the ground. Assuming we could have awarded a contract for building the plant last July, a year ago, and gone into operation last January, we have lost at least $18,000 to date. Our inability to derive revenue is a governing factor in the poor rating of our bonds and credit.

As an additional item of interest, because of inflation in construction costs, additional interest and additional studies such as the Environmental Assessment, to date we can document damages to the District's financial position of $124,270.

D. Increase in Mill Levy. 1. This is a shocker, even to the District Board. Our budgets for the past two years have been prepared on the assumption that by certain target dates we would be developing revenue with the treatment facility in operation. The plain, blunt fact is that for next year at least, we must double the mill levy in Palmer Lake just to pay the interest on the $570,000 general obligation bonds we have already sold. The proceeds of that issue paid for our local contribution to the outfall line, all the collection line as now laid, some engineering fees, legal fees, most of which were unwarranted and unnecessary because of this litgation, and the Environmental Assessment prepared by a second engineer, also unnecessary. The present levy of 10 mills on an assessed valuation in Palmer Lake District of $1,433,390 pays about half that interest. So to start off with, we are looking at a 20-mill levy for 1975 just to pay interest with no reserve to pay off the first $2,000 in principal which is due on December 1, 1975.

2. To take care of Palmer Lake's contribution and other initial expenses, we assume the worst case that we will get no grants, but will have to borrow from Farmers Home Administration at 5%, or EPA, which charges interest nearer the current bank rate. Let's look at a loan from FHA as an example of what may increase still further the Palmer Lake mill levy:

a. Construction at Monument lagoon site: Palmer Lake's contribution is 3/7 of $135,000 or $57,860. Annual interest on thatfigure is $2,893, which when divided by the assessed valuation of $1,433,390, means an addition of two mills. No reserve is provided for amortization of the loan at that rate.

b. Construction at the second site if Monument remains in the regional plant: 3/7 of $265,000 or $113,575, which at 5% means $5,680 interest or four mills. Monument's share of the contribution would be $37,860 in addition to abandoning the investment in its present plant, a circumstance which explains its refusal to move to another site when it has an operating plant.

c. Construction at the lower site if Monument withdraws from the regional plant: ½ of $265,000 or $132,500; at 5%, $6,625 annual interest or a 5 mill levy.

d. Since Palmer Lake is completely without funds and needs materials and equipment to make service connections, another $110,000 is required, hopefully on a short term basis. Again hopefully, we could pay the interest and amortize the principal out of revenues, but if we had to dig into tax money to pay interest, here is another $5,500 a year or four mills. And we should lay immediately about 3000 feet of collection line to replace that which was diverted to another part of the system because of a right-of-way dispute.

3. The only feature of this situation which is definite is that we will have a base levy of 20 mills for at least a year, with some of these other charges tacked on. This is a cruel tax load to impose on people in Palmer Lake with low fixed incomes, plus the fact they are getting no service or benefit from the pipe in the ground. In developing some figures in 1972 for Housing and Urban Development, we established the median income at that time was between $7,000 and $8,000 per family per year. In order to get this District solvent, we could be looking at a levy up to 30 mills, an incredible figure. We shudder to consider what the service charges may become.

We hope these data and information on our credit rating, loss of revenue and mill levies provide the lie and rebuttal to the cavalier and casual comments in the draft EIS that a few months additional delay (at least $27,000 in lost revenues plus the effect of galloping inflation on construction and land costs) is not important. Immediate construction of the Palmer Lake expansion to the Monument facility using plans already prepared is not only important, it is absolutely vital to the health and welfare of the three Districts and to the financial health of the Palmer Lake District.

E. Continuing problems with sewage disposal in the Palmer Lake District.

1. Our patrons in Palmer Lake who have septic tank problems had every reason and right to expect to be able to connect to the sewer systems long ere this. Statements on individual continuing problems will be entered into the record by speakers who will follow me. I will cite the instance of one family with several small children which has septic tank or cesspool problems. That family is able to flush the toilet one time per day, and the children must all bathe in the same tub of bath water.

2. Septic tank effluent and raw sewage from cesspools run down the road ditches and gutters into Monument Creek, a situation which will be addressed by State and local Health Department representatives. The situation will not be improved until District patrons can connect to that $650,000 worth of sewer pipe already in the ground.

3. One of the owners of the trailer courts on the south boundary of the Town of Palmer Lake west of Highway 105 recently had to enlarge his oxidation pond. This facility, according to his neighbors downwind on last July 4th, was obnoxiously smelly.

4. Two of my neighbors in Pioneer Lookout, a part of the District, re-

cently had to pump out their septic tanks. The effluent from my own tile field is bubbling to the surface of the ground.

It seems to us reasonable that construction of facilities to remedy situations in all three Districts, and in Palmer Lake District in particular, should have been permitted to proceed in an orderly fashion. However, since the Environmental Impact Statement has been required by the Court, we urge that the conclusions to be reached in the final EIS be consistent with the facts and analysis that are clearly set forth in the draft EIS—that is, that Site 1 most satisfactorily meets the objectives of the project and is the most cost effective. We believe the draft EIS, except for the conclusion, amply supports that reached in the original Environmental Appraisal, the Negative Declarations and the Environmental Assessment, and hence the conclusion should be the same.

Many expenses have been incurred, mill levies established, taxes collected and interest paid on our reliance on the conclusion of the original impact appraisal. To overturn that conclusion now and to reorchestrate the entire project would seem to require more significant and compelling reasons than are shown in the draft EIS.

Respectfully,

PALMER LAKE SANITATION DISTRICT

By Joseph R. McCammon

JOSEPH R. McCAMMON, P. E.
Chairman

Incl: Ltr, NHPQ, July 9, 1974
Ltr, Stern Brothers, Apr 29, 1974
Ltr, Bank of Woodmoor, Apr 30, 1974

Palmer
Lake
Sanitation
District

TO:

FROM:

P.O. Box 687
PALMER LAKE
Colo. 80133

July 29, 1974

U. S. Environmental Protection Agency
Office of Regional Counsel
1860 Lincoln Street, Suite 900
Denver, Colorado 80203

Gentlemen: Federal Sewage Works Grant No. C 080306

Please enter the following comments into the record of the public hearing on the draft Environmental Impact Statement covering location of the Palmer Lake waste water treatment plant. These comments have particular application to statements made by Mr. Norman B. Bodinger and Mr. Charles A. Lenfest during the session held at the Palmer Lake Town Hall on July 22, 1974.

STATEMENT

Several statements made by Mr. Bodinger and Mr. Lenfest during the July 22, 1974, session of the hearings on the draft Environmental Impact Statement concerning the location of a regional waste water treatment plant for Palmer Lake, Monument and Woodmoor are incomplete; some of these are so incomplete as to be misleading. The points which we believe require clarification follow:

A. 1. Contacts between Mr. Bodinger and his attorney, Mr. Bennett, with the Board of the Palmer Lake District. Mr. Bodinger has talked only to the Chairman, once several years ago during the formative stages of the District; the specific subject of discussion at that time has long since been forgotten. Recently, when CH_2M-Hill delivered the first five (5) copies of the Environmental Assessment to the Chairman, there were two calls concerning method of compliance with EPA instructions for the Chairman to deliver one copy to Mr. Bodinger.

2. Mr. Bennett, Mr. Bodinger's attorney, called Mrs. Alice Foote, the Board Secretary in the October 1971 time frame to advise her that the Bodinger suit

against the Monument Sanitation District had been filed. By canvass of the Board members it was determined that these constitute the total of contacts between members of the Palmer Lake Sanitation District Board and Messrs. Bennett and Bodinger.
Attention is invited to the fact that, immediately upon formation of the District in late 1971, the Palmer Lake District Board meetings were scheduled and announced for 7:30 PM, the second Tuesday of each month at the Palmer Lake Town Hall. These meetings have in all cases been open to the public, as were special meetings.

B. Mr. Bodinger's expressed doubts about the seriousness of the sewage problems in Palmer Lake. The tour taken by Mr. Webster and Mr. Bertrand with four residents of the Palmer Lake District on July 24, 1974, should dispel any doubts on this score. Septic tanks and cess pools don't operate too well on 25-foot frontage lots, even where good percolation results in test holes were obtained. Other areas in the hillier sections of Palmer Lake sit over impermeable strata, with percolation capabilities non-existent.

C. Local contributions to construction of a treatment plant. Mr. Lenfest stated these figures were not given. Attention is invited to Para D2a, b and c of the Palmer Lake presentation of July 16, 1974, which is already entered into the record. It perhaps should be noted that the formula used by Nelson, Haley, Patterson and Quirk slices up the local contribution pie thus: when Monument participates, Palmer Lake 3/7, Woodmoor 3/7 and Monument 1/7; if Monument withdraws, then half and half between Palmer Lake and Woodmoor.

D. Claimed depreciation of land values for property purchased by Palmer Lake District. Mr. Lenfest queried why land acquired for the treatment plant was worth $15-18,000 a year ago is now considered to be worth nothing. A good many minutes and a lot of words were expended in the July 22 meeting in discussing flood plain zoning. It was pointed out, and it is not denied, that all portions of the plant at Site 1 are in the flood plain, or could be so designated when the Albuquerque District, U. S. Army Corps of Engineers, completes its flood plain survey to the headwaters of Monument Creek. Upon such determination, these lots become worthless as home building sites. Lots owned by Mr. Bodinger along Monument Creek west of Site 1 will also become worthless for the same purpose for the same reason.

E. Structures in flood plains. This subject has been checked with Mr. Earl Balkum of the Colorado State Department of Health, Water Quality Control, and with our engineers, who state that a waste water treatment facility may be built in a flood plain, provided the necessary flood protection works are also built. This is being verified with the El Paso County Planning staff.

F. Control of odors. Individuals other than Mr. Lenfest have passed the Woodland Park plant No. 1 along U. S. Highway 24, and have commented favorably and with some surprise on both the absence of odors and the density of family housing in the area, right up to the fence line of the lower lagoon. We submit that timely construction of the Palmer Lake addition to the Monument facility would have minimized, if not eliminated, what low level of odors which are emanating from the present plant because of its overloaded condition.

G. Visual pollution. As was pointed out, visual pollution has not really been defined. People do not generally object to open reservoirs for water systems; these are almost identical in appearance to oxidation lagoons. The Chairman would have no objection, were he living in Mr. Lenfest's homesite, to the appearance of the three lagoon as planned. We reiterate our previous contention that this portion of the problem is almost purely psychological. We have been warned of objections from other areas--where does the cycle end?

H. Impact on Pine Hills and other locations. Mr. Lenfest's attitude has been bluntly stated that "We don't care where you put the plant, but don't build it in our residential area." This conforms with statements made by Mr. Lenfest before the Palmer Lake and Woodmoor Sanitation Boards in 1972 that he would do everything he can not only to stop the expansion of the Monument plant, but to secure its removal from the Pine Hills area. The Bodinger suit against Monument must go to trial to settle whether the present facility is to be moved. That suit, in our opinion, is based on very shaky premises. On the reasonable assumption that the decision would go against Mr. Bodinger and the Monument facility remains at its present location, why should another area be disturbed?

I. Impact on property values in Pine Hills. The Monument plant was built in its present location in 1963. Mr. Lenfest's building permit is dated October 1, 1970. He stated he has an appraisal. It would be interesting to determine if he has actually attempted to sell his property since building his house. Other homes within a half mile of the Monument lagoon were permitted May 11, 1971, December 19, 1972, and June 25, 1973, or so recently that the County Building Department has not as yet posted them to its address card file. Until some experience on home sales in this area is obtained, this factor is moot.

J. Direction from local, State and Federal Agencies. We submit that the Palmer Lake Sanitation District has had no latitude in determining where to establish its treatment facility, and has no latitude today. Establishing the location is the purpose of these hearings. Having gone this far in developing a system, we will build in the location selected. However, we must have relief from excessive local contributions, sharply increased mill levies, and exorbitant service charges. Through no fault of ours, we are being priced out of business. The situation can conceivably reach the point where the Town of Palmer Lake and the Palmer Lake Sanitation District would have to apply to the Colorado State Assembly for legislative relief and a special grant. By the arrangements proposed for a regional plant, Palmer Lake's project was designed as the instrument to upgrade the Monument facility and remove the conditions which have led to the State abatement order.

K. Courtesy visits to the Owens. After it was determined from the draft Environmental Impact Statement that Site 2 was pinpointed on the Owens property, the Chairman and Secretary made visits on July 5th and 13th; the vice-Chairman visited them on the 9th. Mr. and Mrs. Owens had not been consulted; our visits provided them with the first information of what was going on. They were angry at Mr. Bodinger for presuming to speak for them on selling prices, both the high and low quotations. It was expected that the Owens would make their statement on July 16th, but the record shows they finally made it on the 22nd.

Prior to June, 1973, the thrust of the Bodinger-Lenfest arguments was to move the treatment facility to the vicinity of Site 3, a move which would tend to open up considerably more land for suburban development in violation of the El Paso County land use plan. Mr. McCammon and Mr. McCall, with their attorney Mr. Stan Johnson, of the Palmer Lake District and Mr. Price of the Woodmoor District attended the regular June 1973 meeting of the Monument District. It was there that Mr. Bodinger first proposed the idea of moving to the intermediate site. He indicated at that time he believed there would be no difficulty in acquiring the necessary acreage, and that it could be made readily available for purpose of building a treatment plant.

L. The "numbers game." Mr. Lenfest stated he represents 43 people owning properties of a certain value. Most of these are absentee owners. The members of the three sanitation district boards are elected by and represent 2801 residents plus uncounted absentee owners. The assessed valuations of the districts, which can be converted into market values, are a matter of public record.

M. Pumping water downhill. To stay west of the D&RGW tracks, the outfall line is forced below the creek bed at least four feet for some side stream crossings. To bring the sewage back up to level where the plant would be sited on the bank of Monument Creek, a lift station is required, since a sewer line is not a pressure vessel as is a water line. Mr. McKibben of CH_2M-Hill and other engineers engaged in sewage system design assure me that this type of arrangement where a final lift station into the treatment plant is required is more common than those where gravity is the whole force.

N. Use of Site 3. Until we are presented with a letter or affidavit signed by the owner himself of the property on which site 3 would be located, we have reason to discount Mr. Kenelly's oral statement that the owner would donate the property on which to locate the treatment plant. This still leaves the question of access roads and utilities rights-of-way open. Mr. Bodinger, as already noted, provided us with the same off-the-cuff statement about the Owens property in June 1973. The Chairman accompanied the CH_2M-Hill study project supervisor to the vicinity of site 3 in March 1974. At that time, we were emphatically informed by the tenant-caretaker on the property that he had received instructions from the owner to state to any interested individuals that in no way would the owner agree to locating a treatment plant thereon without condemnation and extended litigation. We would be no closer to construction than we are now.

Respectfully submitted

For the PALMER LAKE SANITATION DISTRICT

JOSEPH R. McCAMMON, P. E.
Chairman

RESPONSE TO PALMER LAKE SANITATION DISTRICT

Based on testimony received at the public hearing and additional comments received on the draft statement, EPA has recommended construction of the wastewater treatment facility at Site 1. This recommendation is based largely on the financial infeasibility of using Site 2, though other factors have entered into the recommendation, such as (1) the stated intention of the Monument Sanitation District to withdraw from the joint agreement should Site 2 be selected, thus negating benefits of a regional wastewater treatment facility and (2) the existing public health hazard in regard to the inadequate septic tank systems in Palmer Lake.

Financial advantages to potential land developers were not a consideration in the tentative recommendation in the draft statement that Site 2 should be used as EPA believes that serving currently platted land between Sites 1 and 2 would prove economically infeasible.

Whether one agrees or disagrees with the necessity of the environmental statement, the fact remains that United States District Court in its Findings of Fact and Conclusions of Law stated that the Environmental Protection Agency was unreasonable in its decision not to prepare an environmental statement.

PLSD
Ex. 3

CURT ORMOND
1360 DEERCREEK ROAD
MONUMENT, COLORADO 80132

July 11, 1974

Mr. John Green
Environmental Polution Authority
Denver, Colorado

Dear Mr. Green:

As President of the Woodmoor Water and Sanitation District, I would like to protest the establishment of a second location for our sewage treatment plant, which is now to be one-half mile downstream. At the time of your meeting at Palmer Lake I will be out of the state, and thus I am writing this letter.

I feel that the location downstream is not proper for the following reasons:

1. Because of the higher cost to Monument Water and Sanitation District they will pull out of the agreement. This puts more pressure and financial responsibility on the other two communities. It also negates the benefit of the area approach to solving a problem.

2. By our calculations the cost will be an additional $423,000. Even though we are only paying 25% of this it is certainly an extra burden that we feel is unnecessary at this time.

3. The first study was done by a nationally known firm which confirmed all of our thoughts that it should be in the present location, using present facilities, and no additional funds necessary.

4. The existing facility will reduce the cost of the total project by being able to integrate it into the new system.

5. Woodmoor is now faced with a new financial problem due to the increased cost to our community of the extra half-mile downstream.

6. It was told us that this was probably picked as an alternate site because of the social factors involved. I would like to mention that the social factor might at the present time reach a maximum of fifty people, whereas the economic factor of increased taxes and tax burden would reach 5,000 people.

7. You will undoubtedly get opposition from owners of the property downstream, and that will make an ensuing 270 day minimum delay in the project. As you know we need the project to be completed immediately.

8. It is my personal feeling that the alternate position was arbitrarily picked to satisfy some social and political pressures. I hope that we will all have backbone enough to forget about the social pressures and realize the economic pressures are much more devastating.

Thank you for your consideration.

Sincerely,

Curt Ormond
President
Woodmoor Water and Sanitation District

ACO:rm

RESPONSE TO CURT ORMOND

1. The Monument Sanitation District has stated its intent to withdraw from the joint agreement should Site 2 be ultimately selected. This would negate benefits of an area approach to the problem.

2. The testimony of Mr. Blackwood at the public hearing established the poor financial status of the Woodmoor Water and Sanitation District.

3. No response necessary.

4. Concur with this comment.

5. See response no. 2.

6. In the draft statement, EPA placed much emphasis on the impact of the project on the human environment. This led to a tentative recommendation of Site 2; however, financial considerations were recognized as a possible constraint on its use.

7. The owners of Site 2 have stated that condemnation proceedings would be required to obtain the site.

8. Site 2 was tentatively recommended based on information available at the time of preparation of the draft statement. The available information did not conclusively support Site I. The economic considerations in the proposed project are major and a determining factor in the recommendation of Site I in the final statement but disagree that social pressures should be forgotten.

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

PPACG

MICHAEL J. MEEHAN
Executive Director

27 EAST VERN
COLORADO SP
PHONE (303)471-7080
80903

PLSD
Ex. 4

July 16, 1974

I certify that the attached document is a true copy of the Memorandum submitted to the Pikes Peak Area Council of Governments and acted upon by that body at its regular meeting on July 10, 1974.

Michael J. Meehan
Executive Director

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

PPACG

MICHAEL J. MEEHAN
Executive Director

27 EAST VERMIJO
COLORADO SPRINGS, COLORADO 80903
PHONE (303)471-7080

July 9, 1974

MEMORANDUM

TO: PPACG

FROM: Staff

SUBJECT: Comments on the Draft EIS: Palmer Lake Treatment Facility

On July 1 we received the draft environmental impact statement regarding the Palmer Lake Sewage Treatment facility. There will be a hearing on this draft on July 16, 7:30 p.m. in Palmer Lake, and the record will remain open for comments until August 15, 1974.

We have prepared a synopsis of the situation and some comments on the draft statement for your consideration.

SITUATION

In 1972 the Palmer Lake Sanitation District filed an application with EPA for assistance in the construction of sewage treatment facilities. The site of the project was to be the existing Monument lagoon, and both Monument and Woodmoor agreed to participate with Palmer Lake in a combined effort.

PPACG approved of this activity as being in accordance with the regional land use and sewer plans. It gave favorable A-95 review comments, with the proviso that extra efforts be made to reduce any adverse visual impacts.

The EPA issued a "negative declaration" on the project after the appropriate public hearings, but opposition by land and homeowners in the area resulted in litigation. In January of this year, the District Court enjoined the project and required that an Environmental Impact Statement be prepared. Palmer Lake hired the firm of CH_2M - Hill to prepare an environmental assessment from which EPA could formulate the impact statement. The assessment recommended that the planned location was the best of the available alternatives. The draft EIS, which is now ready for comments, recommends that the location of the plant be moved roughly 1/2 mile downstream.

The purpose of moving the plant downstream is to avoid the social impacts of locating the plant near an existing residential subdivision. At the present time there are some ten houses located within one-half mile of the plant location. Many of these owners and other property holders in the vicinity object to the potential for economic loss, the visual impact of the facility and the odor from the facility.

Palmer Lake Sanitation District objects to moving the plant because of the economic hardship involved and the delay in constructing the facility that will result if it is moved.

STAFF REVIEW AND COMMENTS

If the new facility is moved from its currently proposed location at the site of the Monument lagoon several consequences will result:

1. The downstream location will be more costly to the residents of the Palmer Lake, Monument and Woodmoor Sanitation Districts. The total local cost for the project as proposed would be $135,000, and the total local cost for the downstream location would be $214,000. It must be noted, however, that the latter figure does not include the construction of some 3,000 feet of road to the new site, the installation of power at the new site, the increased costs of engineering a brand new system, the loss of capital investment in the current facility and the loss of revenue caused by a delay of at least nine months in the construction of the plant.

   These economic considerations must be balanced against the potential economic loss to home and lot owners in the vicinity of the plant.

2. The downstream location would not be in accordance with the current regional land use or water and sewer plans. It would bring an additional 600 acres of land into potential urban development along the Front Range. This is against the adopted policy of low density or no development.

3. A new A-95 review of the project would be necessary.

4. There is a distinct possiblity that Monument would not participate in the construction of the new facility if it moved downstream. This would further increase the cost of Palmer Lake and Woodmoor and would result in two facilities. Such a policy is contrary to the adopted regional Plan.

5. A new downstream facility or two facilities would increase the environmental impact on the stream. Having once disturbed the stream and streamside ecology, it is logical that the disturbance should be localized rather than expanded a great deal.

6. A plant in the presently proposed location will have visual, noise and odor problems associated with a sewage treatment facility. The same can be said about the plant in the downstream location. All that is done is to postpone the problem to another time. There are technical and aesthetic solutions to the difficulties such as insulation, planting, good design of the facility and sound operation of the plant. These can go along way towards minimizing the adverse impacts.

STAFF RECOMMENDATIONS

In the event you decide to make comments to the EPA regarding the draft environmental impact statement, staff recommends that the comments be made in writing with a request that they be included in the record of the proceedings on the draft. We further recommend that the comments be based on the foregoing review, and suggest that the solution proposed by EPA will not achieve the most cost-effective water quality management solution, even though it may reduce the current controversy.

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

PPACG

MICHAEL J. MEEHAN
Executive Director

27 EAST VERMIJO
COLORADO SPRINGS, COLORADO 80903
PHONE (303)471-7080

July 25, 1974

RECEIVED
JUL 29 1974
OFFICE OF REGIONAL
COUNSEL

The Office of the Regional Counsel
U. S. Environmental Protection Agency
1860 Lincoln Street
Denver, CO 80203

Dear Sir:

I am authorized to submit the following comments on the draft environmental impact statement on the Palmer Lake sewage treatment facility by the Pikes Peak Area Council of Governments.

The PPACG feels that if the facility is moved downstream, as proposed in the draft EIS, that the most cost-effective water quality management solution would not be obtained. Given the current situation, the resolution of the conflict would only be achieved at greatly increased costs to the local residents, and the present controversy merely postponed.

The draft statement indicates local costs of $135,000 versus $214,000 for the proposed location. It must be noted, however, that the latter figure does not take into consideration the construction of some 3,000 feet of road to the new site, the installation of power at the site, the increased costs of engineering the system, the loss of capital investment in the current facility or the loss of revenue attributable to the delay in final construction of the plant. These economic impacts on the residents of the three districts involved must be weighed against the potential economic losses to home and land owners in the vicinity of the plant.

The downstream location would not be in accord with currently adopted regional land use and sewer plans. It would allow the relatively high density development of at least 600 more acres of land, which would add to the urban sprawl along the Front Range. This is contrary to adopted policy.

There is the distinct possibility that the Monument Sanitation District would not participate in the downstream facility. This means that two plants would use a short stretch of Monument Creek as a receiving water. Two facilities are contrary to the regional policy of obtaining combined use of facilities. Furthermore, two plants would increase the environmental impact on the stream. Having once disturbed the aquatic and streamside ecosystems it seems logical that the disturbance should be localized rather than expanded.

A plant in the present location will have visual, noise and odor problems associated with a sewage treatment facility. The same can be said about the plant in the downstream location. All that is done is to postpone the problem to another time. There are technical and aesthetic solutions to the difficulties such as insulation, planting, good design of the facility and sound operation of the plant. These can go a long way towards minimizing the adverse impacts.

If the location recommended in the draft is recommended as such in the final EIS new A-95 review comments would be necessary from this office and new site approval would be required by the State Health Department.

We offer these comments for the record.

Sincerely,

Michael J. Meehan
Executive Director

srb

cc: Richard L. Brown

RESPONSE TO THE PIKES PEAK AREA COUNCIL OF GOVERNMENTS

Based on testimony received at the public hearing and comments received on the environmental statement, EPA has recommended construction at Site I.

Additional information has been provided in the final statement regarding the financial status of the sanitation districts and the financial infeasibility of using Site 2.

PLSD
Ex. 5

July 15, 1974

PETITION

TO THE ENVIRONMENTAL PROTECTION AGENCY

The undersigned residents of the Monument Sanitation District request that you reconsider your environmental impact statement and change said statement to recommend that the Tri-District such treatment facility be located adjacent to and made a part of the present Monument Lagoon.

NAME	ADDRESS
Charles J. White	P.O. Box 382 Monument 80132
Don L. Brown	" " 126 " "
Benito R. Vallejos	P.O. Box 243 Monument, Colo.
[illegible]	P.O. Box 472 Monument, Colo.
Janet Reis	P.O. Box 413 Monument, Colo
[illegible]	[illegible] 413 Monument Colo
Charles [illegible]	
Jerome Conway	P.O. Box 85 " "
[illegible] A. White	[illegible] 382 Monument
Ed Brown	P.O. Box 301 Monument
Robert Cross	210 Washington Monument
[illegible]	Box F [illegible]
Norma L. Brown	P.O. Box 126 Monument, Colo.
Steven W. Spencer	P.O. Box 12 Monument, Colo.
Cheryl Spencer	PO Box 12 Monument Colo
[illegible]	PO Box 216 Monument Colo
Christine B. Harrell	PO Box 216 Monument, Colo
Ernest W. Baugh	PO Box F Monument, Col.
Velda R. Baugh	Box F Monument, Colo.

NAME	ADDRESS	
Shirley A. Munson	PO Box 377	Monument Co
R. L. Munson	P.O Bx 397	Monument Co.
Elvis H. Fagan	PO Box 215	Monument Colo.
Sibyl B. Fagan	PO Box 215	Monument Colo.
C E Pat Bombard	P.O. BOX 502	MONUMENT COLO
Richard L. Rotz	P.O. Box 343	Monument Colo
Dorothy A. Rotz	P.O. Box 343	Monument Colo
Guy W. Harness	PO Box 266	Monument Colo.
Dorothy E. Harness	P.O. Box 266	Monument, Colo.
Bernice C. Dominik	P.O. Box 472	Monument Colo.
Dusty Sibell	P.O. 93	Monument, Colo.
Weslie L. Naylor	P.O. Box 253	Monument, Colo.
Donna R. Naylor	P.O. Box 253	Monument Colo
Trudy L. Lowell	Box 623	Monument, Co.
Lola McDonald	Box 261	Monument Co.
James Larsen	Box 177	Monument Co
Joan Larsen	Box 177	Monument Colo
Carol Owens	Box 207	Monument Colo
Charles H. Owens	Box 207	" "
Mrs Jennie Green	Box 122	" "
Mrs Eva Slabaugh	Box# 433	" "
L. V. Slabaugh	" "	" "
Vee B H Mullaney	Box 164	Monument Colo
Rose A. Shoyer	Box 301	" "
Warren Langer	Box 304	" "
Janice Dukes	P.O. Box 453	" "
Ronald S. Dukes	" "	" "
Jack C. Kerridge	105 Mitchell	Monument Colo.

PLSD
Ex. 6

MEMORANDUM

July 11, 1974

SUBJECT: Project History Contained in the Draft Environment Statement - Palmer Lake Sanitation District

TO WHOM IT MAY CONCERN:

This history is contained on pages 2 and 3 of the Environmental Impact Assessment done by CH2M Hill and included in the Draft Environmental Statement. This history is reproduced below:

DATE	
1963	Monument lagoon constructed.
1965	Monument lagoon washed out by flood.
1965	Woodmoor project initiated.
1969	Efforts begin in Palmer Lake to develop sewerage system.
Oct 1969	PPACG prepares "Monument, Palmer Lake, Woodmoor, Water-Sewer Facilities Plan, 1970-1990."
Dec 1969	PPACG prepares "Regional Sewerage Plan, 1970-1990," Showing Existing Monument lagoon to be maintained and enlarged for joint use.
May 1970	PPACG issues "Pikes Peak Regional Land Use Plan, 1990," calling for development of areawide sewerage facilities for Palmer Lake, Monument, and Woodmoor.
1970	Suit filed by original owner of Monument lagoon site to have lagoon terminated and land returned.
May 1970 & Dec 1970	NHPQ Engineers prepare Service Plan for Palmer Lake Sanitation District. Plan explores three alternative sites, estimates cost, and recommends proposed project.

MEMORANDUM July 11, 1974

SUBJECT: Project History Contained in the Draft Environment Statement - Palmer Lake Sanitation District

Feb 1972	Colorado Health Department issues cease and desist order on existing Monument lagoon, effective Dec 1972.
Feb 1972	Aeration added to Monument lagoon to improve treatment.
Aug 1972	PPACG approves "Interim Water Quality Management Plan" showing joint treatment facility at existing Monument lagoon.
Spring 1972 to present	Affected residents and property owners seek to have project removed to another location and file protests on proposed action.
Jan 1973	EPA files Environmental Impact Appraisal with Negative Declaration.
Feb 1973	Federal grant offer of $394,275.00 to Palmer Lake Sanitation District. Grant accepted by District.
Apr 1973	EPA files revised Environmental Impact Appraisal and Negative Declaration.
Jul 1973	Suit filed to enjoin lagoon project.
Jan 1974	Court injunction requiring that Environmental Impact Statement be prepared on proposed project.

We believe that this history is not accurate in chronology and that the correct chronology will provide significant information. The chronology as revised by us is:

1963	Monument lagoon constructed.
1965	Monument lagoon washed out by flood.
1965	Woodmoor project initiated.
1969	Efforts begin in Palmer Lake to develop sewerage system.
Oct 1969	PPACG prepares "Monument, Palmer Lake, Woodmoor, Water-Sewer Facilities Plan, 1970-1990."

MEMORANDUM July 11, 1974

SUBJECT: Project History Contained in the Draft Environment Statement - Palmer Lake Sanitation District

Oct 26, 1969	Mr. Norman Bodinger was employed by the Woodmoor Corporation.
Dec 1969	PPACG prepares "Regional Sewerage Plan, 1970-1990," Showing Existing Monument lagoon to be maintained and enlarged for joint use.
May 1970	PPACG issues "Pikes Peak Regional Land Use Plan, 1990," calling for development of area-wide sewerage facilities for Palmer Lake, Monument, and Woodmoor.
Jun 4, 1970	The Woodmoor Water and Sanitation District No. 1 Board of Directors approved a bid for installation of an aeration system in the Monument lagoon.
Nov 5, 1970	Woodmoor Water and Sanitation District No. 1 Manager reported the aeration system in operation.
May 1970 & Dec 1970	NHPQ Engineers prepare Service Plan for Palmer Lake Sanitation District. Plan explores three alternative sites, estimates cost, and recommends proposed project.
Oct 1971	Mr. Norman Bodinger departed on extended leave from the Woodmoor Corporation.
Oct 29, 1971	Summons for suit, Bodinger vs Monument Sanitation District issued to have lagoon terminated and land returned.
Nov 10, 1971	Mr. Bodinger terminates employment with the Woodmoor Corporation.
Feb 1972	Colorado Health Department issues cease and desist order on existing Monument lagoon, effective Dec 1972.
Aug 1972	PPACG approves "Interim Water Quality Management Plan" showing joint treatment facility at existing Monument lagoon.
Spring 1972 to present	Affected residents and property owners seek to have project removed to another location and file protests on proposed action.

MEMORANDUM July 11, 1974

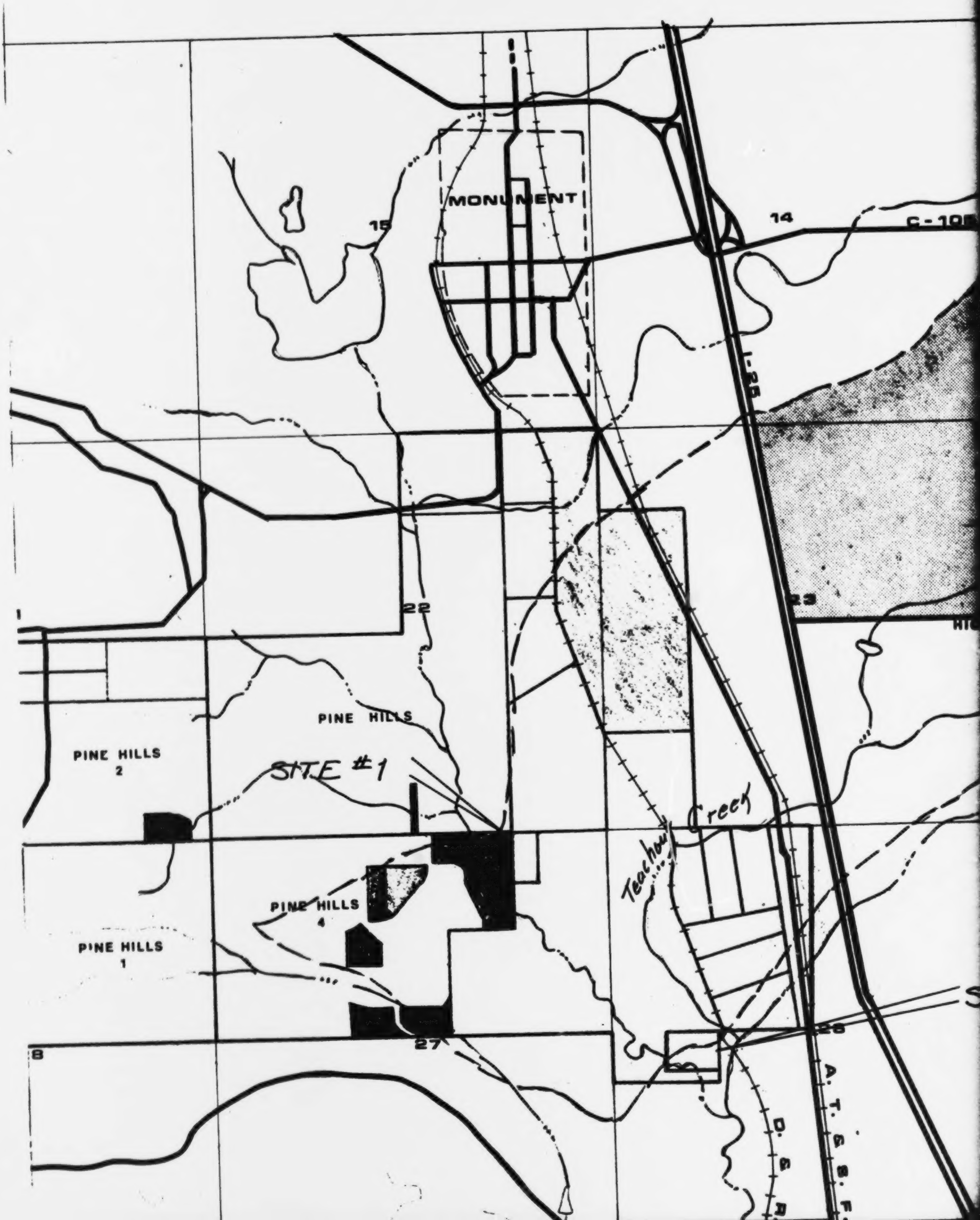
SUBJECT: Project History Contained in the Draft Environment Statement - Palmer Lake Sanitation District

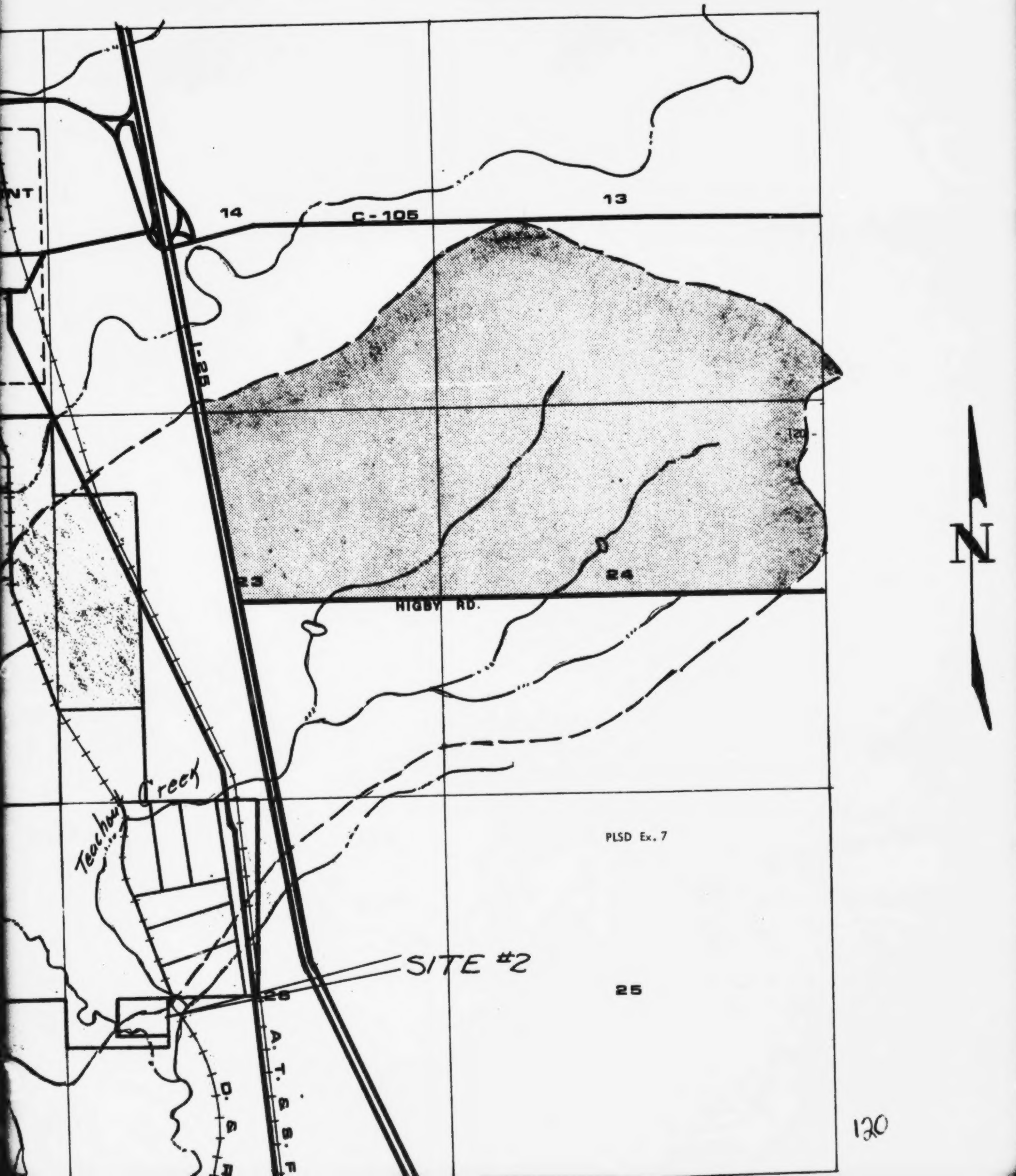
Jan 1973	EPA files Environmental Impact Appraisal with Negative Declaration.
Feb 1973	Federal grant offer of $394,275.00 to Palmer Lake Sanitation District. Grant accepted by District.
Apr 1973	EPA files revised Environmental Impact Appraisal and Negative Declaration.
Jul 1973	Suit files to enjoin lagoon project.
Jan 1974	Court injunction requiring that Environmental Impact Statement be prepared on proposed project.

We feel that it is important to point out that in the original chronology it appears that Mr. Bodinger filed suit before the aeration system was added to the Monument lagoon. This is not correct. We feel that it is of primary importance to point out that Mr. Bodinger, while employed by the Woodmoor Corporation during the period of October 1969 through October 1971, was present at the time the aeration system was installed and made no objection to the installation thereof, either during the period before the bids were accepted for construction, the period of construction, and more significantly, waited one year after the system was in operation before filing suit. It is our belief that Mr. Bodinger's failure to act in any way during the period of logical influence against the aeration system indicated that at that time Mr. Bodinger had no objections and that at some point during the first year of operation of the system he changed his mind as a result of some other influence not present before.

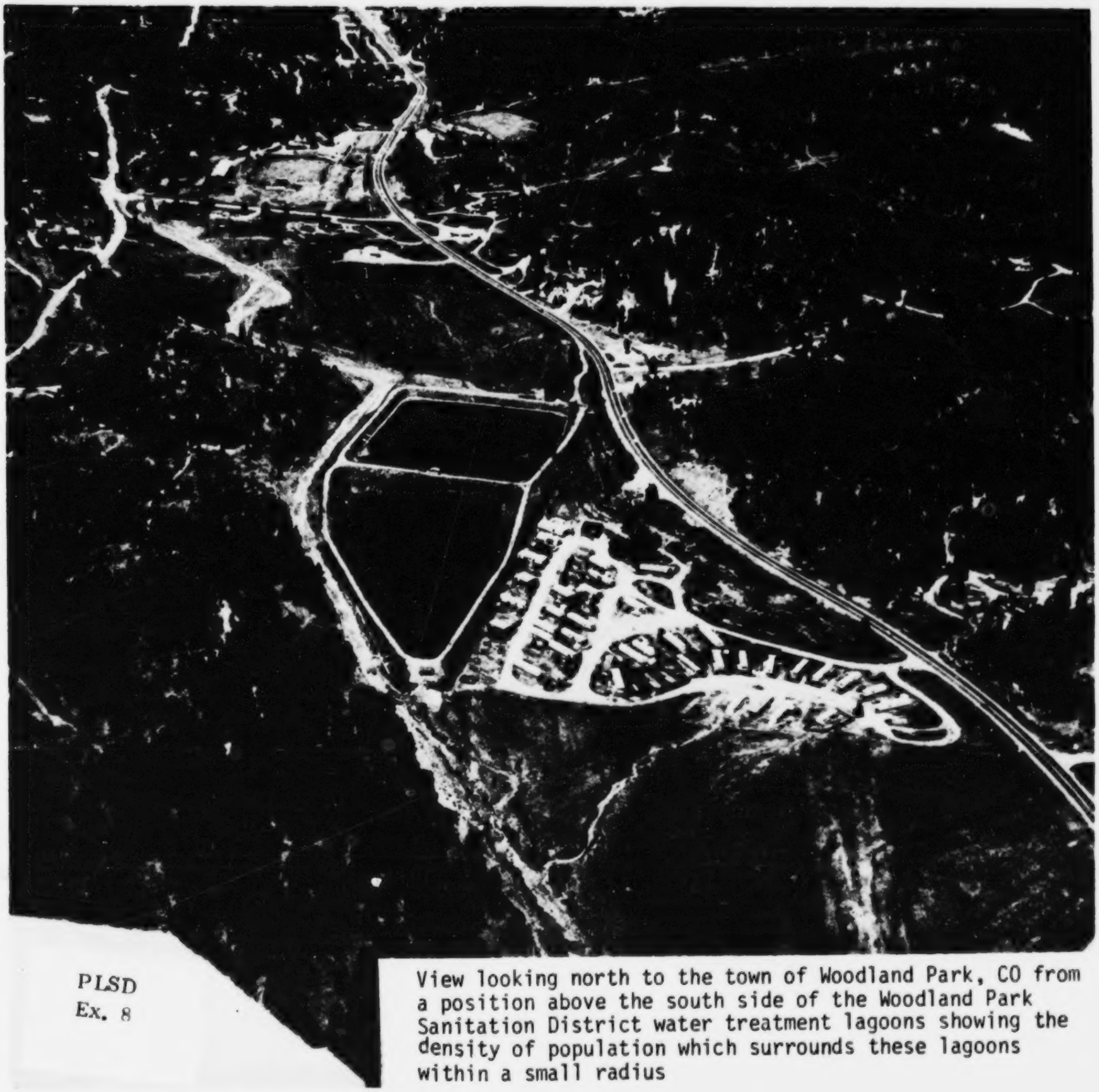
RESPONSE TO PROJECT HISTORY SUBMITTED BY PLSD

The chronology as submitted by the Palmer Lake Sanitation District has provided significant information regarding the project, and the installation of the aerator in the lagoon.


MONUMENT
15
14
C-10
I-25
22
23
HIG
PINE HILLS
PINE HILLS
2
SITE #1
Teachout Creek
PINE HILLS
4
PINE HILLS
1
8
27
26
A. T. & S. F
D. & R


NT
14
13
C-105
I-25
120
23
24
HIGBY RD.
N
Teachout Creek
SITE #2
26
25
A. T. & S. F.
D. & R

PLSD Ex. 7



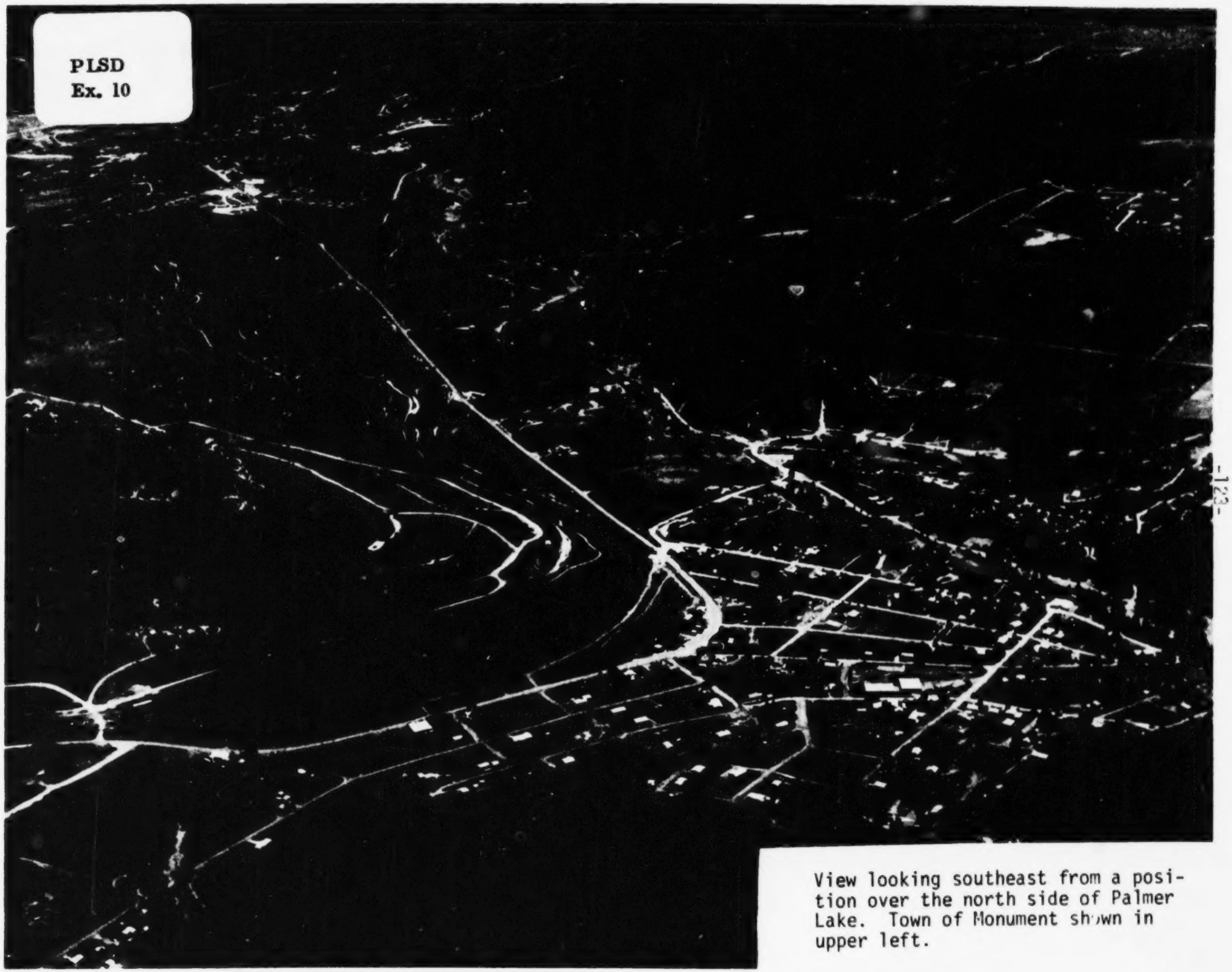
PLSD
Ex. 8

View looking north to the town of Woodland Park, CO from a position above the south side of the Woodland Park Sanitation District water treatment lagoons showing the density of population which surrounds these lagoons within a small radius

View looking northwest to the town of Woodland Park, CO from a position above the southeast side of the Woodland Park Sanitation District water treatment lagoons showing the density of population which surrounds these lagoons within a small radius

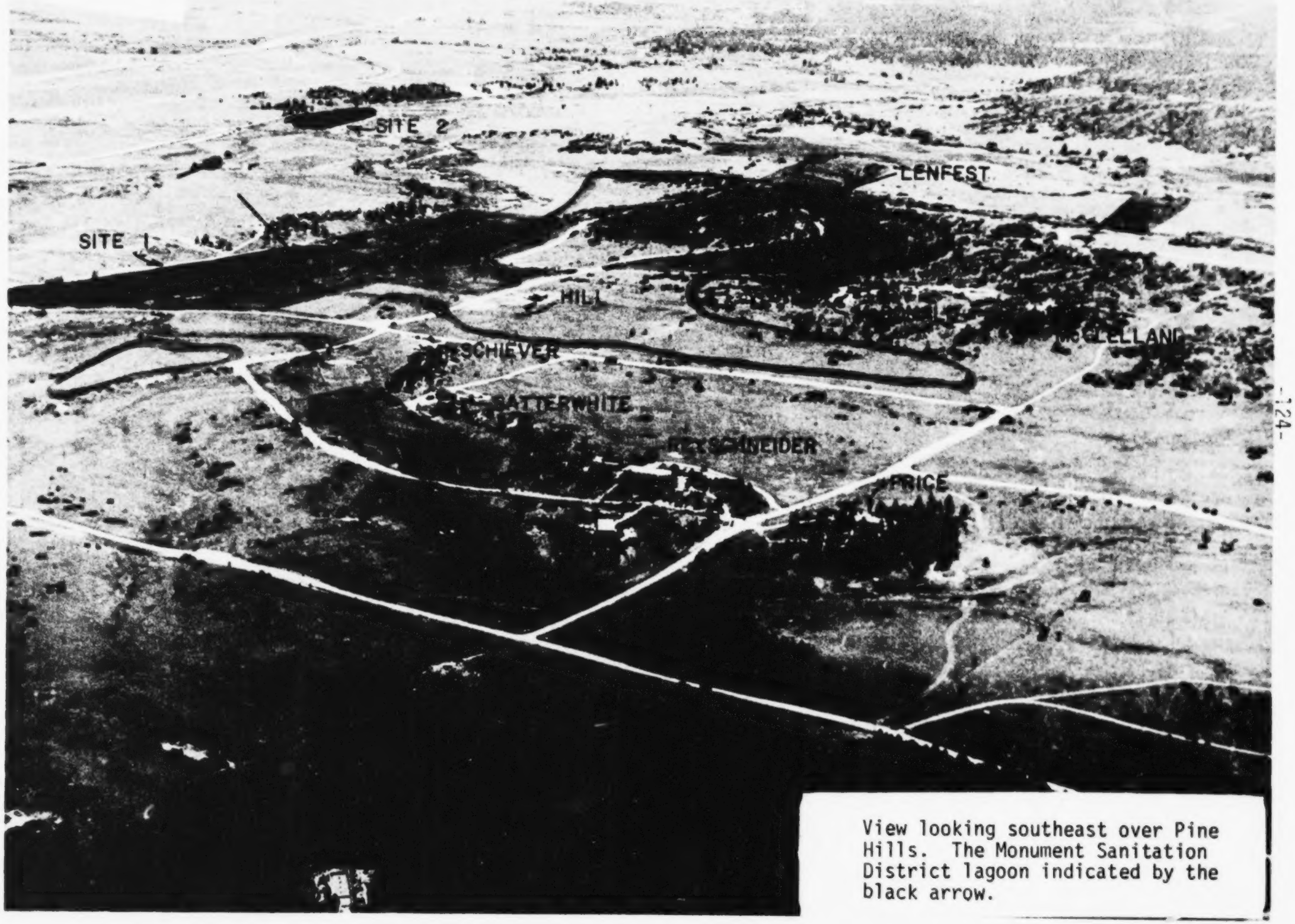
PLSD
Ex. 9

PLSD
Ex. 10

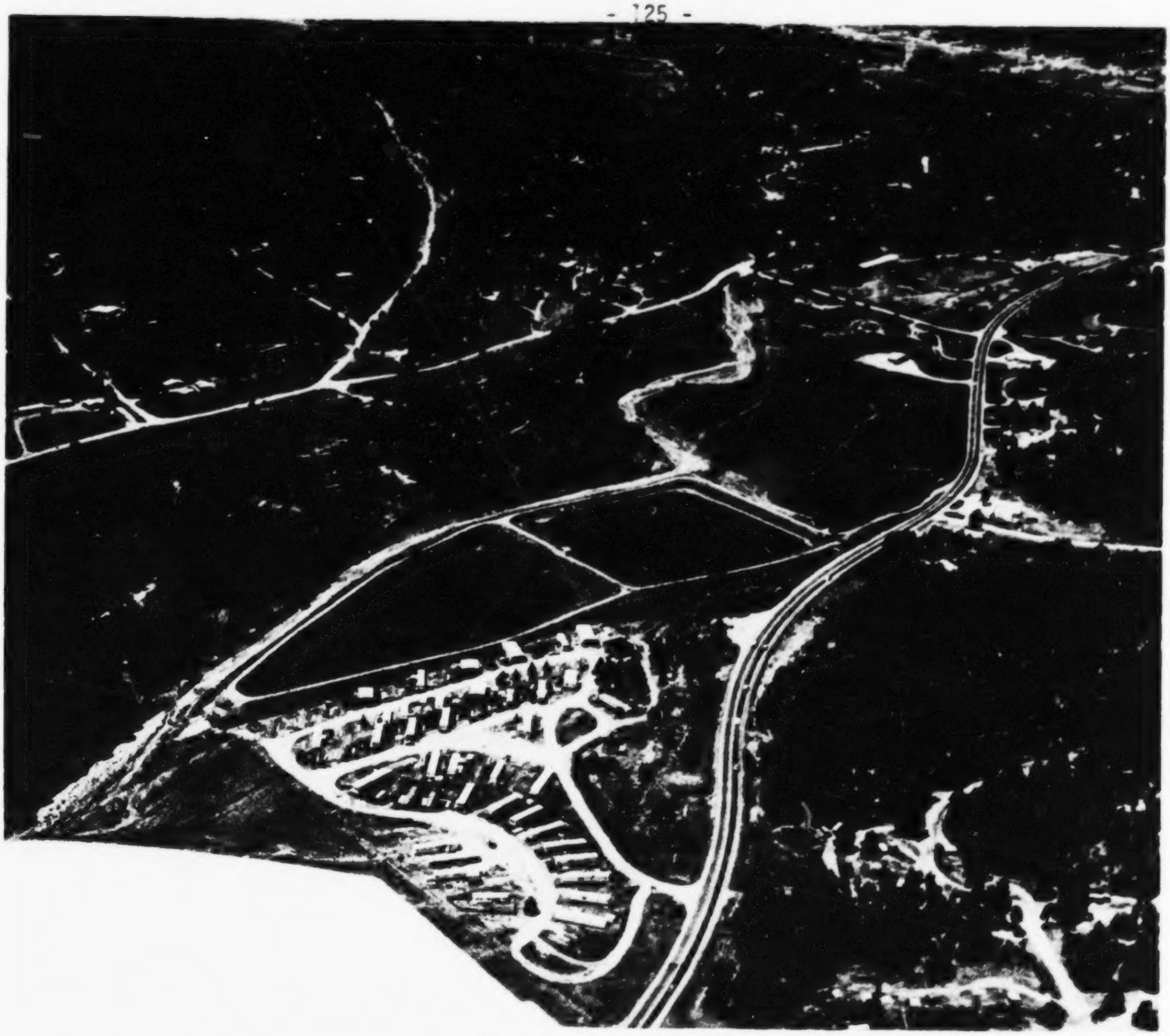


View looking southeast from a position over the north side of Palmer Lake. Town of Monument shown in upper left.

PLSD
Ex. 11


SITE 2
LENFEST
SITE 1
HILL
SCHIEVER
McCLELLAND
SATTERWHITE
SCHNEIDER
PRICE

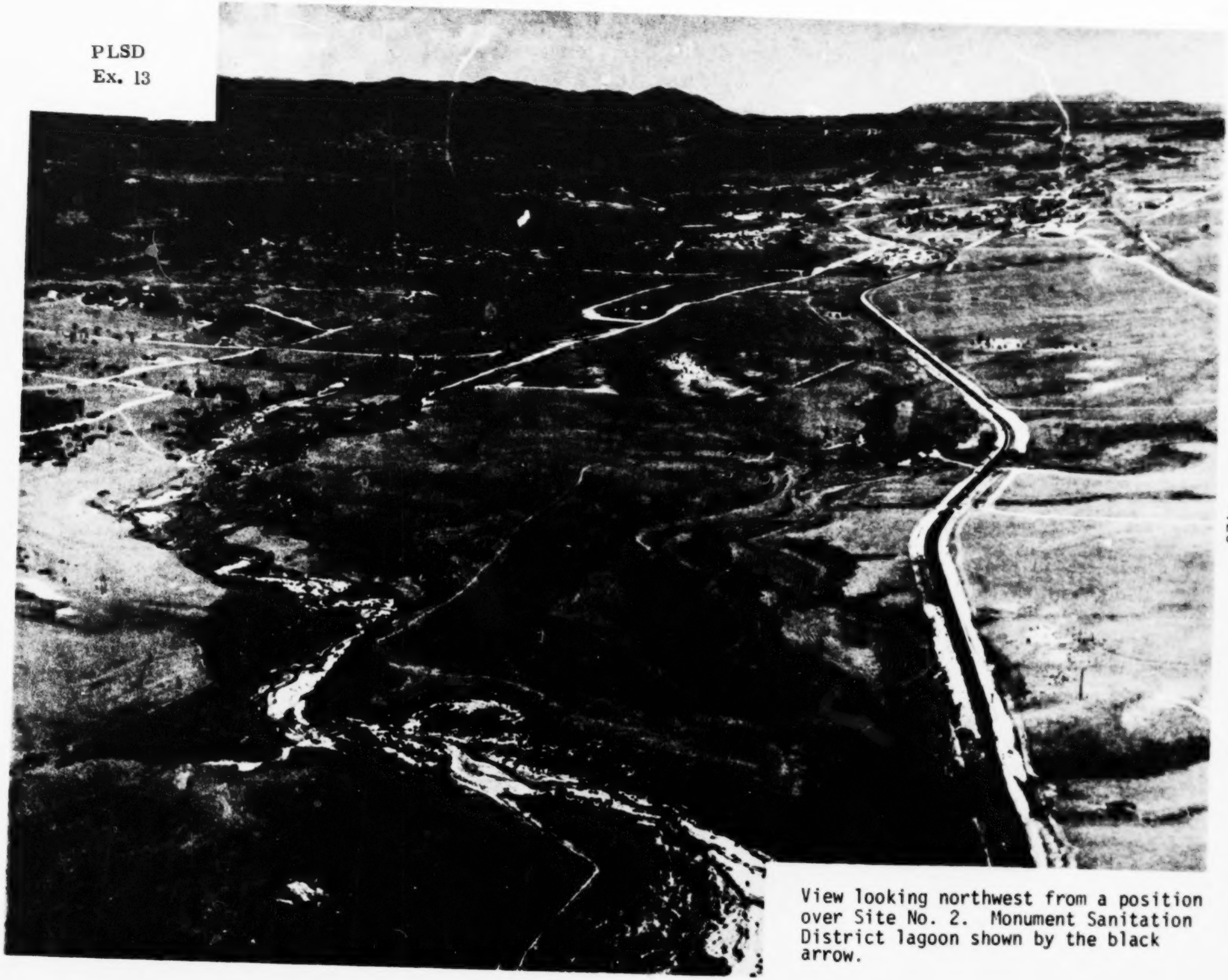
View looking southeast over Pine Hills. The Monument Sanitation District lagoon indicated by the black arrow.



PLSD
Ex. 12

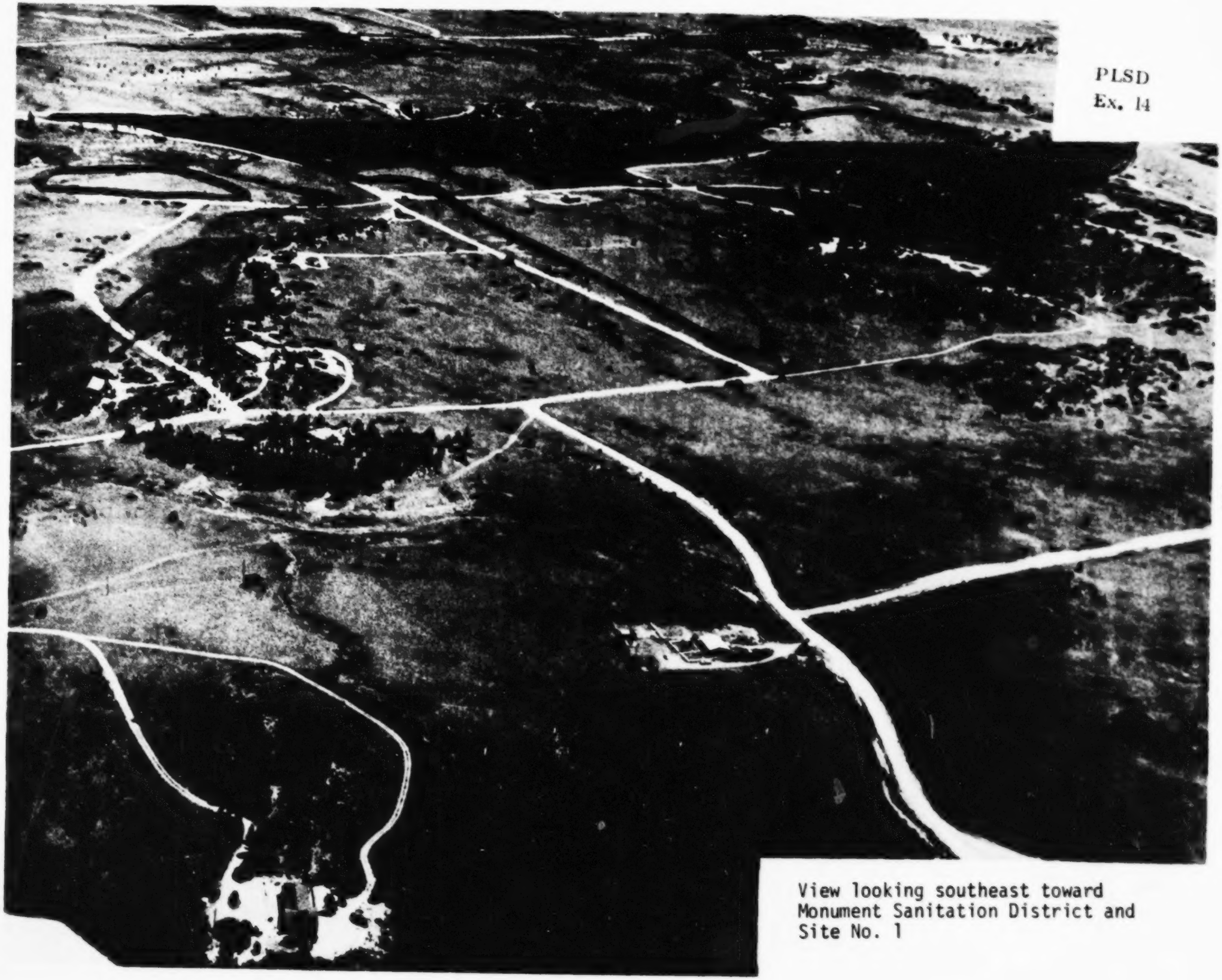
View looking northwest to the town of Woodland Park, CO from a position above the southeast side of the Woodland Park Sanitation District water treatment lagoons showing the density of population which surrounds these lagoons within a small radius

PLSD
Ex. 13



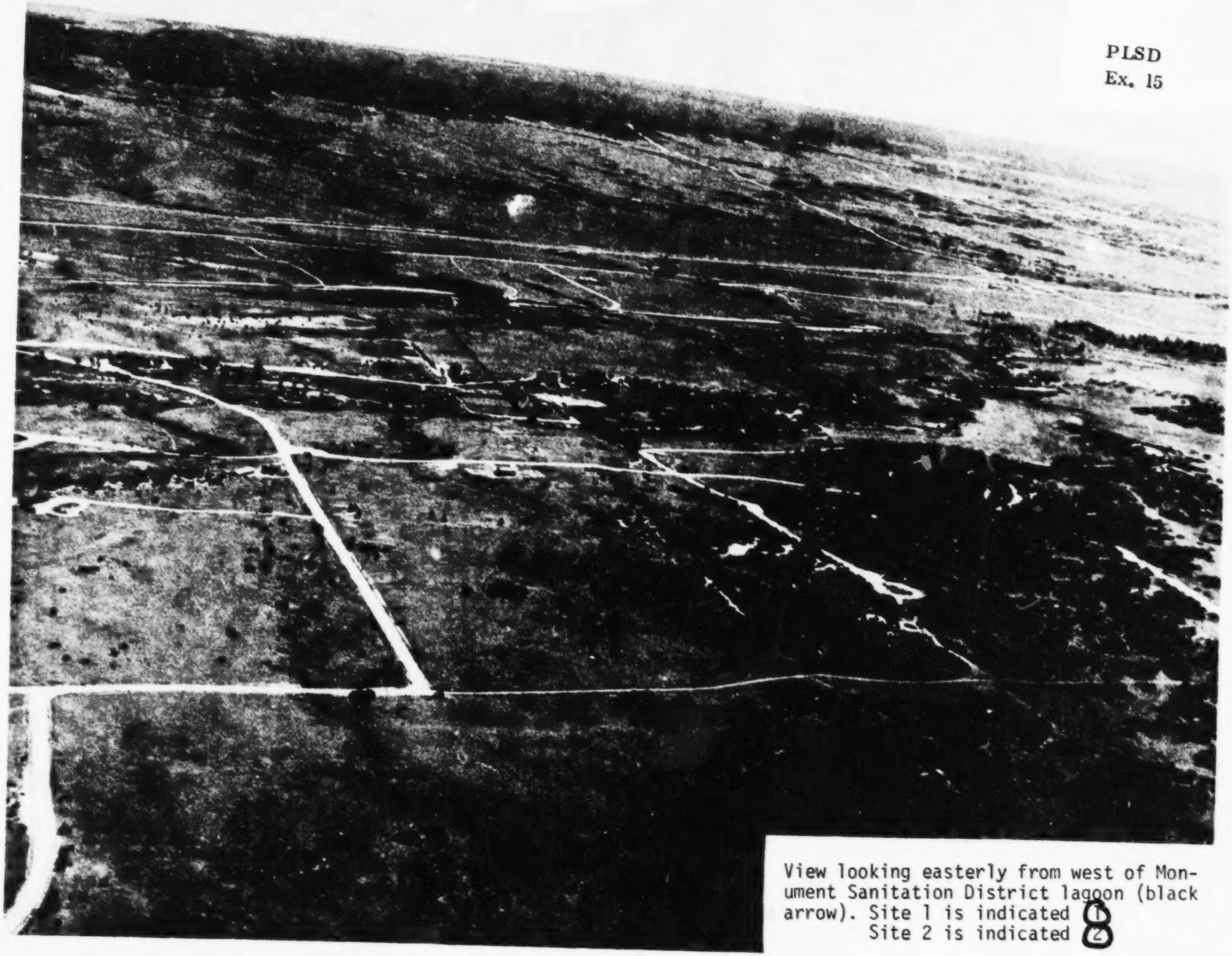
View looking northwest from a position over Site No. 2. Monument Sanitation District lagoon shown by the black arrow.

PLSD
Ex. 14



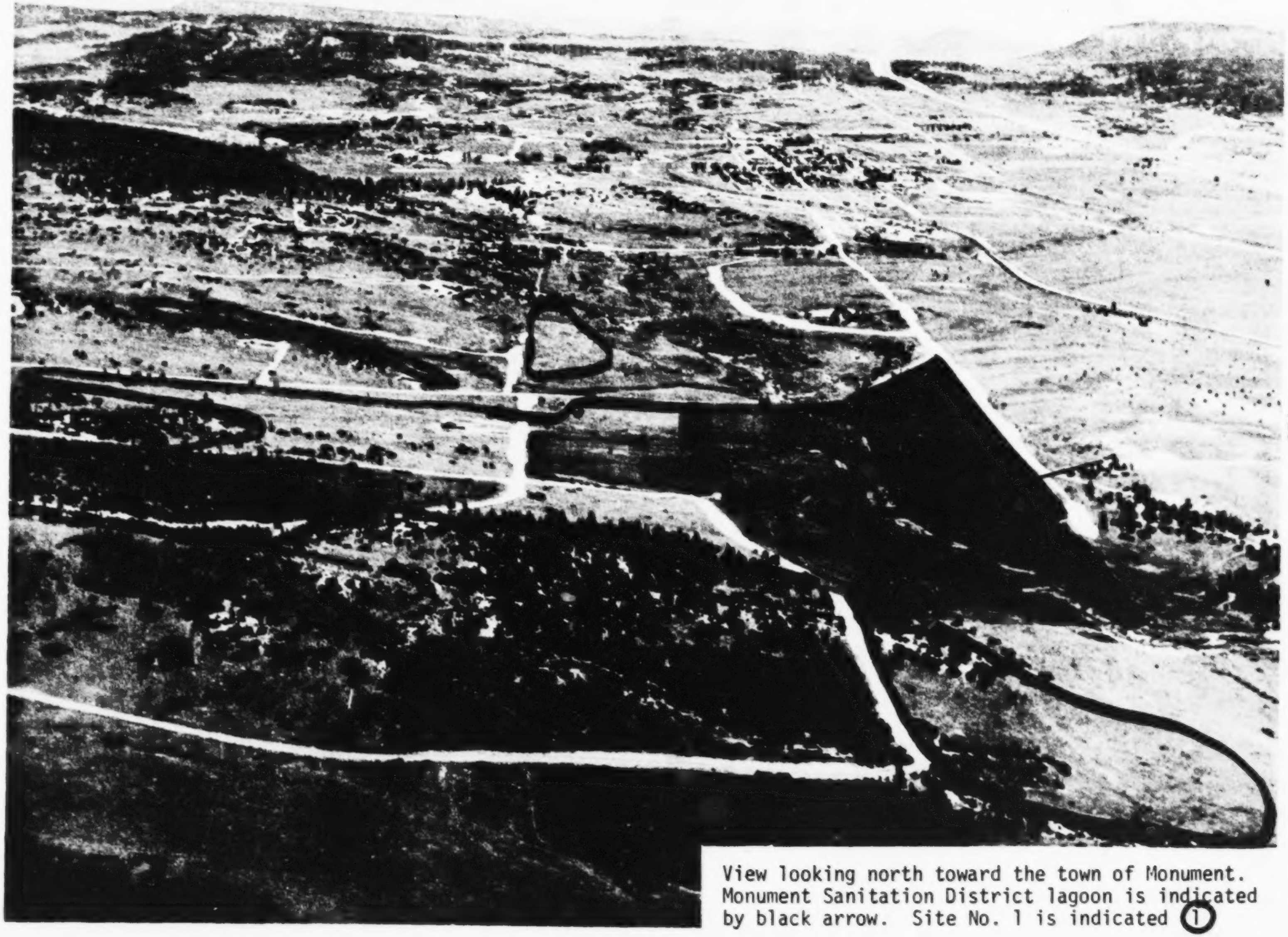
View looking southeast toward Monument Sanitation District and Site No. 1

PLSD
Ex. 15

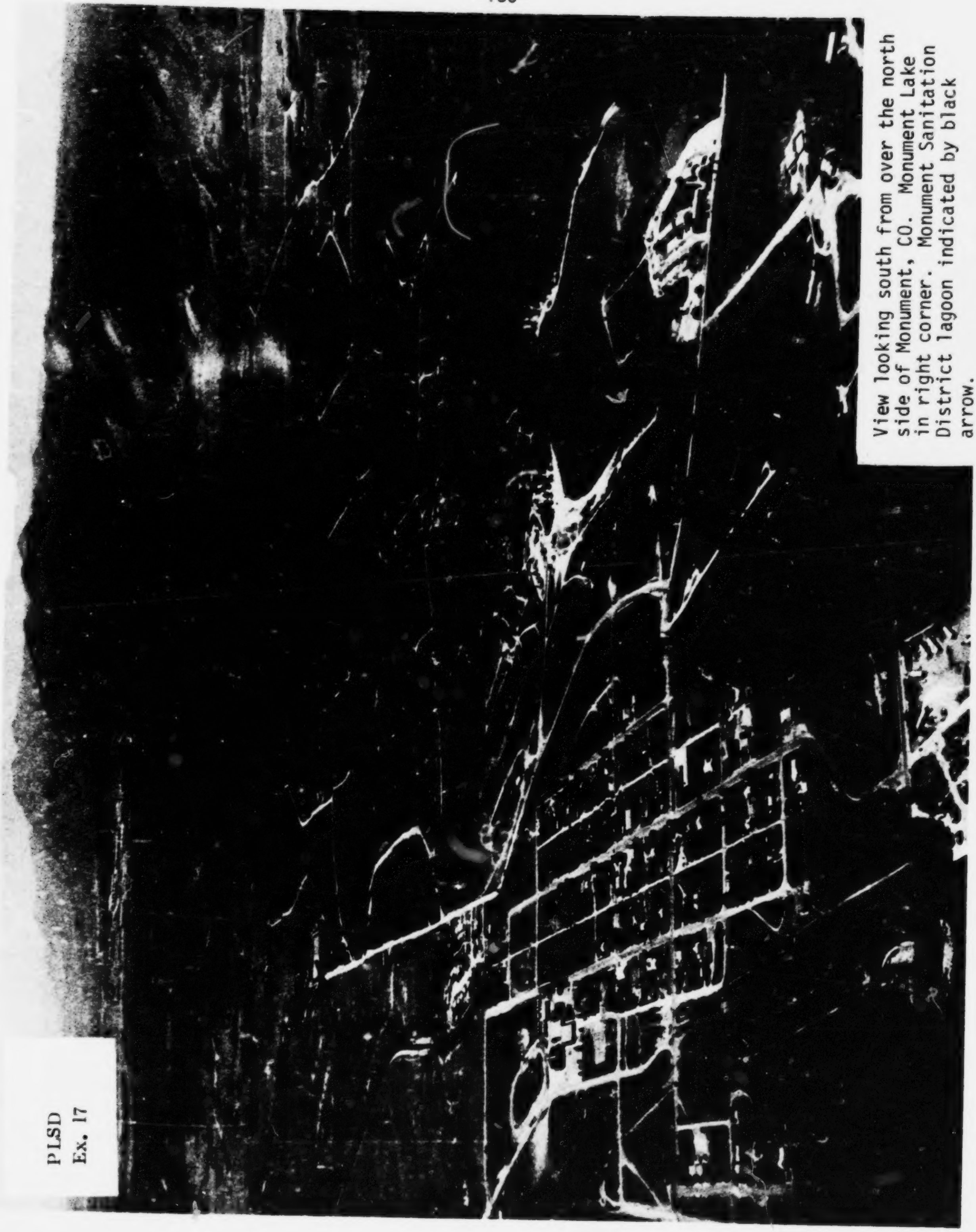


View looking easterly from west of Monument Sanitation District lagoon (black arrow). Site 1 is indicated ①
Site 2 is indicated ②

PLSD
Ex. 16



View looking north toward the town of Monument. Monument Sanitation District lagoon is indicated by black arrow. Site No. 1 is indicated ①



View looking south from over the north side of Monument, CO. Monument Lake in right corner. Monument Sanitation District lagoon indicated by black arrow.

PLSD
Ex. 17

July 16, 1974

Mr. John Green
Environmental Protection Agency

PLSD
Ex. 18

Dear Mr. Green,

We would like to take this opportunity to let your committee know the problems we have been experiencing with our septic system for over three years. And to express the urgency we feel in having the sewer completed.

This is a partial list of the inconveniences we have been forced to suffer.

1. We cannot flush our toiled more than 3 or 4 times a day. After that it eithers runs over or nothing goes down.
    A. You can image the smell.
    B. The embarassment when out-of-town guests or friends or neighbors come to visit.
    C. The overall inconvenice and irritation.

2. We have to drain water from the washing machine onto the patio and it has killed some of our lawn.

3. I cannot use my dishwasher more than 3 or 4 times a week. And then only at bedtime so the water will have the night to drain into the tank.

4. When the workmen came to install the water meter in our crawl space we found it soaked with sewer water from the septic tank. The smell was pretty bad and accounted for some pretty awful odors in the house. The workmen would not go down into the crawl space until we "did something about it".

5. We had the septic system pumped again. This time it had been 1½ years since the last pumping. The last time it cost $115.00 and 3 weeks later the system was exactly as it had been prior to the pumping. We felt it wasn't worth spending the money if we still had the problem--that we'd grin and bear it until the sewer was ready. Since it is backing up into the crawl space we had it pumped again for $50.00. The man who pumped it said our dry well is not functioning at all, and the septic tank is for all intent and purposes worthless. He felt we had to have a new system. This could "cost around $1000.00--maybe a little less".

6. My husband is self-employed and this fact demands we entertain Our custom was that we have family groups out on Sunday afternoons. This has had to stop completely. Just because we do not have functioning toilets. If we do invite a couple or two for dinner, then that day we cannot:
    A. Take a bath unless we leave the water in the tub to be drained out at bedtime.
    B. Run the dishwasher.
    C. Bathe our children (unless we follow the procedure above).

7. When we bathe our 3 children they all have to use the same bath water. Then we have to leave the water in the tub til bedtime so the toilet won't run over.

8. My husband and I have to limit our showers or baths to very small amounts of water and only at bedtime or the rest of the day we have smells in the house and toilet problems.

9. We have been told if we should want to or need to sell our house the Health Department would not allow us to unless we replaced the entire septic system.

This all may seem inconsequential to you but I assure you it isn't. Its totally frustrating and I really get mad. We have waited and suffered patiently for this sewer system. We are becoming disgusted with the red tape and beg you to allow our sewer system to be finished as soon as possible.

We ask that this letter be included in the record of this hearing.

Sincerely,

Rochelle Evans
Jay J. Evans
Rochelle Evans
Box 444
Palmer Lake, Colorado 80133

RESPONSE TO JAY AND ROCHELLE EVANS

EPA staff members have visited the Evans' home and are aware of the problems the family is experiencing.

The Final environmental statement recommends that Site I, the site of the existing lagoon, be used for the expanded facility.

July 15, 1974

Office of Regional Administrator
Region VIII
United States Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado   80203

Gentlemen:

Enclosed herewith are our comments regarding the Environmental Impact Assessment for the Palmer Lake Sanitation District prepared by CH2M Hill under date of May 1974. These comments will be abbreviated in that they were discussed at length with your staff during a meeting in your office in early June 1974.

We are also including comments regarding your draft Environmental Impact Statement for the Palmer Lake Sanitation District Project No. C 080306.

We wish to take this opportunity to thank all of the staff members of the Environmental Protection Agency for their deliberate and thoughtful consideration of the facts in this matter and their objective review of this factual data.

We shall be pleased to furnish any additional documentation as you may desire.

Very truly yours,

Norman B. Bodinger

John F. Hughes

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

We generally concur and completely support the tentative recommendation of the Environmental Protection Agency that the sewage plant be located at Site 2. Our comments in this section will be confined to those not made in the previous commentary of the Assessment review.

1. Page 9

   There is a small detail left out in that the flood of 1965 is not mentioned. During this flood in June of that year the present Monument lagoon was washed away and had to be rebuilt. Corps of Engineer disaster emergency funds were used for this purpose as a clear and present danger to the public health, welfare and safety existed due to the discharge of raw sewage into Monument Creek.

2. Page 13

   In order to support the PPACG Land Use Plan, we propose to deed the present Monument lagoon lot and the one immediately to the south of it, both of which are in the Monument Creek flood plain, to the El Paso Park and Recreation District for use as a streamside day time recreational facility. We will deed this without cost provided we have assurance that the District will accept the land and will place it into the 1R plans for a suitable park as they may determine.

3. Figure 3

   The Land Use Plan of 1990 shows recreation and open space on approximately one half of the platted residential lots in Pine Hills. This is a small error but it should be corrected. It also shows a greenway along the Monument Creek path which would be wholly compatible with our stated offer to deed approximately ten acres for this park.

4. Page 16

   "Horizons '72" already provides for park and recreation facilities in this area.

5. Page 18

   Objective No. 3 is a most important one which was neglected by the Environmental Assessment review. We thoroughly agree that "the least expensive project is not necessarily the one to be recommended for construction when environment and social objectives are considered."

Nowhere in the Palmer Lake Sanitation District material is any account taken of the value loss of homesites not only in monetary value but in the factthat these sites would no longer be desirable as building sites. As stated by Judge Finesilver, "there is no adequate remedy at law to compensate these landowners for this loss." Therefore, a cost increase in the overall project of approximately 10% is inconsequential when considered along side the losses to the homesite and homeowners.

6. Page 19

The expenditure of $185,000 in the interception line was a management decision made by the Palmer Lake Sanitation District. This expenditure was made while the project was in litagation and consequently those responsible committed themselves to a path from which it would not be easy to back out. Here again, if this was a poor decision, innocent people should not suffer because of this error. It must be remembered that the people affected by plant location at Site 1 will receive absolutely no benefits from the plant now nor in the future: The size of the lots would make sewer lines economically prohibitive, the restrictive covenants prevent a lot size smaller than one acre, and the fact that they are not located in any Sanitation District nor will they ever apt to be, will mitigate against any future usage of the facility at either Site 1 or 2.

7. Page 22

Site 5 has an additional disadvantage in that its location would be an affront to the town of Monument.

8. Figure 5, Page 28

This diagram shows that the treatment plant is no longer a simple lagoon. This third cell is no longer an oxidation pond but includes a chlorination building and contact basin. Thus, the temporary expedient for Monument has grown into a full three-stage treatment plant for the three districts.

9. The irrigation water effluent on a privately owned golf course which may not exist in the future is not a strong argument. This golf course was designed to maximize the number of homesites fronting the course. One wonders how the residents and lot owners would react to a nightly spraying of non-potable water in what constitutes their front or back yards.

10. Page 36

The savings of $235,000 between Site 2 and Site 1 probably includes inflationary rises. Since the delay in this project was caused by insufficient preparation as required by the Environmental Protection Act, we do not believe that this increased cost should be at the expense of the third and innocent parties.

11. Page 37

A noise level of 51 dba may be acceptable for residential areas, however, what is the evaluation in a rural area that does not have normal urban residential noise backgrounds? Noise suppression costs could very well increase the costs at Site 1. People living or building in the Pine Hills area move to these locations for peace and serenity. The constant 51 dba noise level would be a severe environmental impact on these homesites.

Proper landscaping at that altitude and in the Monument Valley would be most difficult. With the planned rip rap, it would be impossible to establish and maintain native grasses. Even if such were established, the growing season is so short that the area would be an eye sore for nine to ten months out of the year. One must remember that the selection of plants and fauna that will survive at 6900 feet and provide visual cover is virtually non-existant. More definitive plans and proposals must be shown before one can be convinced that landscaping could moderate the appearance of the facility. When you couple this fact with a huge aeration system and three ponds of bubbling water, we again have a severe visual impact.

"Odor should not be a problem with the facility at this site" - The initial impact appraisal prepared by Nelson Hailey Patterson and Quirk states on page 9 that "there will be an odor from the proposed facility. Under normal operating conditions the odor will not be a hydrogen sulfide (rotten egg) odor. While difficult to describe, the normal odor eminating from this facility will be a sewage odor similar to that produced by a natural non-septic marsh area."

The existing lagoon washed out and was reconstructed in 1965. (See 3.)

12. Page 43

a. There is no substantiation provided for the health risk for the Palmer Lake citizens because of delays and as stated before, other actions could be taken to further overload the Monument lagoon.

b. No mention is made of the probability that the Palmer Lake Sanitation District will resell the lots they have purchased at Site 1.

13. Page 54

There are 50 homesites within a one-half mile radius of Site 1. There are at least 15 homesites within a quarter of a mile of Site 1. Assuming the 15 homesites have a market value of $7,500 per 5-acre parcel, which is the average price that Palmer Lake paid for its land, these 15 sites would be of little or no value as homesites; a loss of $112,500. More importantly, they constitute a homesite loss to the owners who did not buy them in 1956-58 for investment or speculation but purchased them for retirement location. The other 35 homesites lying within the one-half mile radius would depreciate at least 50% which would be a loss of $131,250. This loss in land value is over $240,000 and does not include the certain loss of value of the homes already constructed.

In addition, since Site 1 is located within 75 feet of the main access to another 100 homesites there would be some definitive loss to the value of these sites when the approach road is funnelled through the edge of a sewage treatment plant.

Summary

The overall and most significant impact of locating a sewage treatment plant in an established residential area with restrictive covenants is that it will prevent this area from achieving its goal - a serene, pastoral, rural, close-in, scenic location for those who desire to live in this environment.

Pine Hills is a unique piece of property at the base of the Front Range. Over the years it is slowly but surely growing into what its founders and purchasers envisioned. To destroy this for the sake of approximately $150,000 is short sighted and is contrary to the precepts and purposes of the National Environmental Protection Act.

COMMENTS ON ENVIRONMENTAL IMPACT ASSESSMENT

I. General

The Assessment prepared by CH2M Hill is comprehensive, accurate and complete insofar as to the subject matter to which it addresses itself. In view of the time allocated for the preparation and publication of this document, the firm is to be commended for the quality of their report.

The major discrepancy in the report is that it does not adequately address itself to the availability of domestic water supplies within the subject areas. This availability or lack of such is a major constraint and should have been used as one of the parameters in the overall Assessment. This is particularly true where reference is made to concentrated population growth other than at the present communities at Woodmoor, Palmer Lake and Monument. It is important, in this context, to note that the location of any sewage disposal plant cannot greatly affect the future urbanization of additional areas if there is insufficient domestic water to provide for this urbanization. At the present time the Colorado State policy is to disapprove any domestic water wells into the aquafers other than that required for a single family dwelling. This policy is further supported by objections from the United States Air Force Academy, Monument and Woodmoor Sanitation Districts. Thus, the establishment of a sewage plant cannot materially affect urbanization when taken in the context of our present water laws, policies and deficiencies.

II. Specific Comments On Relative Advantages and Disadvantages of Selected Alternatives

For the sake of brevity, these comments will not reiterate those incorporated into the draft Environmental Impact Statement.

A. Alternate A. Advantages

1. This problem has already been attended to even though the land were to revert to private ownership, enforcement of the restrictive covenants and the closing of the present lagoon would shut off the private road and prevent a reoccurance of the dumping ground.

2. It is difficult to justify the nearness of Site 1 to the Woodmoor golf course as an advantage. The golf course is a privately owned property and public funds should not be expended for the purpose of providing effluent to the golf course. In the second case, the Woodmoor Corporation is now under Chapter 10 Bankruptcy. There is no assurance whatsoever that it will continue to exist as a golf course into the next golf season.

3. The impact of the former Monument lagoon was minimal. At the time it was "given" to the Monument Sanitation District the lagoon consisted of a three acre pond that did not intrude upon the natural environment. After the placement of aeration equipment into the lagoon, this constituted an intrusion in that the bubbling effect took away the natural look of a somewhat square-shaped lake. The construction of the proposed facility which would be over six times the size of the former simple, still water pond, would have a severe impact on the natural and social environment.

4. We agree with the comment of the Environmental Protection Agency.

5. Good road access is not necessarily desirable. This leads to increased traffic and a tendency for people to use it as a dumping ground. A private road access from the south and on the east bank of Monument Creek would be inexpensive to build and maintain and could be fenced off to prevent unauthorized use.

6. Urban residential densities will not be affected for reasons of water availability as stated above.

7. Future growth and land use planning is not as uncertain as one might believe. An economical interim solution can be more costly in the long run than a well-thought-out, long-term solution.

B. Alternate A. Disadvantages

1. The statement is incomplete in that it refers to a Pine Hills subdivision. This is more than a subdivision in that it consists of approximately 200 five-acre residential homesites. The value or the probability of these homesites being built upon would be significantly decreased were the proposed plant to be built at Site 1. It would be most difficult to obtain financing for any lot within view of the proposed plant. For this reason, not only will the present homeowners and landowners suffer financial losses, but this land would be taken out of inventory as future homesites. Already divided into five-acre lots, they cannot be reassembled into agricultural units and restrictive covenants severely prohibit uses other than single family residences.

   At a later point in this document we shall address ourselves to the costs of the movement from Site 1 to Site 2 versus the losses to be sustained by the landowners in the area.

5. There is not sufficient land to expand this plant beyond a ten year life. Therefore, if the growth figures presented in the Assessment are to be accepted, a ten year period does not justify the social and economic impact upon the effected land and home-owners of Pine Hills.

C. Alternate B. Advantages

No Comments.

C. Alternate B. Disadvantages

2. The Monument lagoon site was deeded to the Monument Sanitation District "so long as it shall be used by said District as an oxidation pond or lagoon." In the context of the days in which that deed was prepared and in order to satisfy the bonding company, this wording was carefully chosen by the Monument Sanitation District's attorney. It was our intention that as the community grew, a larger, more sophisticated plant would be required and that the community would then have sufficient funds to move the plant to a less obtrusive location. Our sole purpose in deeding this five-acre area without cost or any other consideration was to provide a sewage disposal system for Monument which they could not afford unless the plant was located only at that site. The rationale of growth stimulating movement of the plant was correct when taken in context of the time and considerations existing in 1962. The additional cost for the removal of the old lagoon is minimal and we have offered to pay for this at our own expense.

3. Wholly disagree with this statement and support the Environmental Protection Agency comment.

5. Development would not be induced in this area if public roads and platting were not permitted and the general land use plan of the County were adhered to. Here again, intensive development could not occur without domestic water and associated problems as stated above.

6. a. Monument and Woodmoor Sanitation Districts have a contract which stipulates that Woodmoor will pay its pro rata share of any increased facilities caused by growth. The total cost of the old Monument lagoon was approximately $5,000 in 1962. It is the Environmental Protection Agency policy to encourage joint enterprises of this type and alternate B at Site 2 would require no more financial and political difficulties than at Site 1.

b. The paragraph further says that "the delays are critical because of Palmer Lake septic tank failures." However, at the beginning of the Environmental Impact Assessment, CH2M Hill states that "the project is necessary because of the gradual failure of septic tanks...in the city of Palmer Lake." This paragraph also mentions that the present Monument lagoon is overloaded. In December of 1972, Monument Sanitation was notified by the State Health Department of the overloading and an abatement order was issued. In spite of this abatement order, no action was taken by the Monument Sanitation District nor Woodmoor Sanitation District which shares the lagoon facilities to ease or correct the abatement. As an example, neither District has imposed any type of moratorium on sewer taps despite the fact that the lagoon was already overloaded. Further, the records will indicate that since the date of the abatement order there have probably been more sewer taps from these two Districts connected than during the prior 3 to 4 years. Consequently, the timing and delays associated with Alternate B should not be at the expense of the adjacent property owners since they are the result of insufficient or improper action by the Districts and the State Department of Health.

8. Cost estimates as presented are misleading or inconclusive for the following reasons.

a. If Alternate B were used, the land costs of Alternate A could probably be recovered through sale by the Palmer Lake District.

b. It is difficult to say why the same plant would cost an additional $68,000 at Alternate B.

c. The sum of $80,000 for approximately one-half mile additional interceptor appears to be high.

d. The land cost for Alternate B should not be higher than the land cost at Alternate A. Between the two Alternates, there is an additional $35,000 of engineering and legal fees. Alternate A capitol recovered is based on a 20 year cap rate when the report states its probable use would be limited to ten years. When this is readjusted, the total local annual cost of Alternate A would be equal to or perhaps higher than Alternate B.

III. Summary

After thoroughly examining the advantages and disadvantages of both Alternates, the recommendation by CH2M Hill for Alternate A is simply not supported by their own arguments.

RESPONSE TO NORMAN B. BODINGER AND JOHN F. HUGHES

The response is made in the same order as the comments submitted.

Comments on statement:

1. The final EIS includes mention of the 1965 flood and the fact that the existing Monument Lagoon was severely damaged.

2. No response necessary.

3. Figure 3 has been corrected in the final environmental statement.

4. No response necessary.

5. The final statement recognizes that some homesites may be less desirable for building purposes with a facility at Site I. In our judgment the sites most affected for building would be those shown on Figure 9 in the statement. Judge Finesilver did not specifically address the subject of loss of value of homesites (page 9 Findings of Fact and Conclusions of Law and Decree, April 1, 1974.) He did, however, state that "There are aspects of irreparable injury to the plaintiffs if the court denies the motion for injunctive relief, such injury arising from the establishment or enlargement of sewage treatment works in a residential area . . . ." He further stated "The court questions that the plaintiffs have an adequate remedy at law . . ."

   Based CH2M figures, our calculations show a 30 percent plus increase if Site 2 is used (from $488,000 to $723,000.) Costs for Site 2 would probably be more than the $723,000 stated in the CH2M assessment (see letter from Nelson, Haley, Patterson and Quick).

6. The decision to construct the interceptor line was made by EPA and the Palmer Lake Sanitation District and it is true that the decision was made subsequent to litigation. However, the decision to do so was made after consultation with plaintiffs, who did not object, as stated on pages 147 and 148 of the transcript of the public hearing.

   It is unlikely that residents of Pine Hills would be able to make use of the facility, regardless of which site is used.

7. EPA concurs that Site 5 would be a disadvantage to the town of Monument.

8. No response necessary.

9. The bankruptcy of the Woodmoor Corporation casts much doubt on the use of effluent to irrigate the Woodmoor golf course.

10. The cost estimates in the CH2M assessment are based on construction beginning in 1975 and thus include an allowance for increased costs from 1974 to 1975. Regardless of the reasons for delay of the project increased costs are a factor that must be recognized as they significantly affect the choice of sites.

11. No information on background noise levels is available for the project area. The blower will be contained in a blower house as shown on Figure 5 of the statement. Noise should not be a problem with the proposed project.

    Landscaping would be a significant mitigating factor with a facility at Site 1. Vegetation could not, of course, be established on the rip rapped areas. A tour of the project area shows that sufficient vegetation grows at the 6,900 foot elevation to provide for landscaping of the facility. More detailed discussion of landscaping is provided in the final statement.

    It is acknowledged that there would be an odor associated with the facility but it should not prove to be objectionable.

    The fact that the existing lagoon washed out in 1965 has been added to the text of the statement.

12a. It cannot be stated categorically that if the facility is not in operation by a certain date that a set number of persons in Palmer Lake would become ill because of the existing septic tank situation. Lots within Palmer Lake generally have inadequate area for septic tank disposal of domestic wastes and it also appears that soil conditions are generally not conducive, in some locations, for septic tank systems. Septic tank is surfacing at various locations along road cuts in Palmer Lake, the Baptist camp and in peoples' yards. In EPA's judgment the problem is of enough significance to require a solution as soon as possible.

b. There may be a possibility that the District could resell lot 18 as it appears to have enough area out of the flood plain to provide an adequate area for building. This is not felt to be the case with lot 17.

13. EPA does not believe that the homesites within 1/4 mile (at least 15) would have little or no value as homesites. We definitely feel that some of the lots close in to the site would be less desirable (see Figure 9) and that to a certain extent, sites up to 1/4 mile from the site may be adversely affected. Outside the 1/4 mile from the site may be adversely affected. Outside the 1/4 mile radius, the impact is insignificant and there is no reason to believe that the remaining 35 homesites would suffer depreciation.

    The fact that one must pass a wastewater treatment facility enroute to a homesite that may be from 1/4 mile to a mile or more from the facility does not imply a reduction in the value of these homesites. EPA does not agree that the value of another 100 homesites would suffer a definitive loss because of an access road (Arnold Drive) which passed a waste water treatment facility.

SUMMARY

Establishment of the facility at Site 1 would adversely affect residential lots in the immediate vicinity as well as several residences. County zoning in the area is both A-4 and A-5, each designation requiring minimum lot sizes of 5 acres. (See zoning regulations in the appendix.) The zoning regulations permit non-residential uses within the area. For example, both the A-4 and A-5 designations permit fur farms with the condition that the "operation of same is within the confined area of an enclosed building where artificial air conditioning is required.)

Comments on Environmental Impact Assessment:

I. General

The availability of domestic water is acknowledged to be an important factor in urbanization, but funds are not available for an in-depth study of the availability of both surface and ground water supplies for the three communities. Such a study is not essential in deciding on the location of the facility. Location of the facility at either site would provide pressure to develop new sources of supply or perhaps lead to more intensive utilization of existing supplies, perhaps to the detriment of e.g., the ground water resource.

II. Specific Comments on Relative Advantages and Disadvantages of Selected Alternatives.

A. Alternate A - Advantages

1. No response necessary.

2. The nearness of Site 1 to the Woodmoor golf course is an incidental advantage should irrigation with the effluent prove feasible. Public funds could not be expended to pump effluent to the golf course. The bankruptcy of the Woodmoor Corporation makes the nearness of Site 1 to the golf course an advantage of at least questionable value.

3. The water surface area of the present lagoon is about 2.3 acres, and the two additional lagoons would add a combined water area of approximately 4.8 acres for a total water surface area of 7.1 acres.

4. No response necessary.

5. All-weather access is a requirement for normal operation and is a necessity in the unlikely event of a major plant malfunction. No cost estimates have been made for an access road from the south along the east bank of Monument Creek (assuming Site 2 was selected.)

6. See response to I. General.

7. EPA's interpretation of this advantage as cited by CH2M is that should there be significant changes in future needs, then use of Site 1 would provide an economical solution in the interim period, but that based on present knowledge Site 1 would provide a relatively long term solution to the problem. This recognized, however, that Site 1 does have some limitations.

B. Alternate A - Disadvantages

1. At least 15 lots within 1/4 mile of Site 1 would be adversely affected by the facility at Site 1. Figure 9 shows the sites, which in EPA's judgment would be most affected. Beyond the 1/4 mile limit, we do not believe the impacts are significant. Certainly, the vast majority of the approximately 200 homesites in Pine Hills should not be adversely affected by a facility at Site 1.

5. The plan, as presently contemplated, is to expand the treatment capacity of the facility by installation of additional aeration grids, not by additional lagoons. Based on present population projections, this would occur about 1985 and would provide sewage treatment for approximately 13,000 persons.

C. Alternate B - Advantages

No response necessary.

D. Alternate B - Disadvantages

2. No response necessary.

3. No response necessary.

5. See response to I. General.

6a. It is EPA's policy to encourage joint facilities such as the one proposed for the three sanitation districts. The draft statement recognized financial and political difficulties in obtaining an agreement to use Site 2. These difficulties were brought out at the hearing and in comments received on the statement. For example (1) Monument Sanitation District has stated that it will withdraw from the Tri-Party Joint Use Agreement Plan if Site 2 is selected (2) the Colorado Department of Health has indicated that it is very doubtful if Site 2 would receive approval from the State, (3) the PPACG representative at the hearing indicated that the PPACG would probably not approve Site 2, (4) El Paso County approval is unlikely, and (5) there appears to be no possibility of establishing a buffer zone around Site 2.

b. There is no conflict here. Over a period of years as Palmer Lake has grown, the failure of septic tank systems has been gradual. Whereas, a number of years ago, with a less dense population, systems were probably adequate (and some still remain adequate), an intolerable situation now exists where city lots of nominal size are on septic systems. Effluent is surfacing in peoples' yards and in road cuts in Palmer Lake.

8a. It may be possible for the Palmer Lake Sanitation District to resell lot 18 as this lot appears to have sufficient area out of the flood plain to provide a building site. It is doubtful if lot 17 could be resold as it appears to be situated entirely within the flood plain.

b. The cost estimate for Alternative A (Site I) is based on detailed engineering; also construction bids were received on this site in 1973. The estimate for Site I is considered very reliable.

Alternative B (Site 2) could not be investigated in detail during the course of the environmental assessment investigation. Consequently, there is a greater degree of certainty in the estimate for Site I. Testimony at the hearing indicated a likelihood of encountering cemented sands at Site 2, a factor which can increase costs. It cannot be said that the cost estimate for Site 2 is a firm estimate, but it appears reasonable in view of the available information on which it is based.

c. Because of uncertainties in making estimates in the absence of detailed engineering information, this estimate is probably reasonable and adequate for its intended purpose. The project consulting engineer believes it may be low because of difficult excavation conditions between Sites I and 2.

d. Site acquisition costs were a subject of considerable discussion at the public hearing with no conclusive evidence as to what the cost would be at Site 2. The purchase cost to the Palmer Lake Sanitation District for additional land at Site 1 is on the order of $1,500 per acre while estimates of the cost per acre at Site 2 range from several hundred dollars to $2,500, with condemnation likely to be necessary. Land at Site 2 is on the market for $2,085 per acre as stated by the owner, Mr. Owens, at the public hearing, but not for the purpose of constructing a watewater treatment facility. The difference in land costs for Sites I and 2 is accounted for by (1) the difference in cost per acre used for each site, and (2) the fact that less land has to be acquired at Site I than at Site 2.

If a reasonable cost for land at Site 2 is $1,500 per acre (based on the cost of land at Site I) then the acquisition cost of Site 2 would be $27,000 but the cost spread between the sites would still be in excess of $200,000, using the CH2M estimates as a base.

The additional engineering and legal fees totaling $35,000 appears reasonable.

As initially constructed, the facility would be adequate for 8 - 10 years at which time the treatment capacity would be increased by the installation of additional aeration grids to extend the life of the facility. Therefore, the use of a 20-year capital recovery factor is reasonable. All annual capital costs shown are based on a 20-year capital recovery at 7 percent interest, and are comparable.

III. Summary

CH2M's reasoning behind recommendation of Site I was adequately covered at the public hearing and is addressed in EPA's response to Richard Hanes.

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. BOX 25287
Denver, Colorado 80225

RECEIVED
JUL 16 1974
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12 JUL 1974

United States Environmental
Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Attn: Mr. John A. Green,
Regional Administrator

Dear Mr. Green:

We are pleased to respond to your letter of June 19, 1974, regarding the draft environmental statement, Palmer Lake Sanitation District, Palmer Lake, Colorado, Project No. C 080306.

In this connection, no established or studied units of the National Park System appear to be adversely affected by the proposal, nor does the proposal appear to adversely affect any site registered as a National Historic, Natural or Environmental Education Landmark, or any site listed as eligible for such registration.

Since all properties on the National Register of Historic Places are published in the Federal Register, the statement should reflect consultation with the issue for February 19, 1974, and all subsequent monthly supplements. The supplementary listings of sites added to the National Register, subsequent to publication of the previous supplement, are cited in the Federal Register appearing on the first Tuesday of each month. The statement should also establish whether a proposed project will have an effect upon a National Register listing. Where this is found to be the case, the statement should reflect compliance with Section 106 of the National Historic Preservation Act of 1966 (P.L. 89-665) and Executive Order 11593.

The statement does not clearly establish that there has been consultation with the State Historic Preservation Officer for the state involved. The final environmental statement should reflect that he is consulted to determine whether the proposal will affect any cultural site which may be in the process of nomination to the National Register of Historic Places. This is customarily done by

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including with the final statement his letter of comment. Where federally owned or controlled lands would be affected by the proposed action, the environmental statement should reflect the consideration given objects of historical, architectural, and archeological significance under Section 2 (b) of the Executive Order 11593 of May 15, 1971, Protection and Enhancement of the Cultural Environment.

The statement should discuss the action taken or proposed to professionally determine the presence or absence of archeological resources in the project area and the effect of the proposal upon any such resources present. In this case, in compliance with the National Environmental Policy Act of 1969, an archeological survey is needed to establish whether there are archeological resources in the project area. The statement should further reflect procedures to be followed should previously unknown archeological resources be encountered during project development.

Sincerely yours,

Richard A. Strait
Associate Regional Director,
Cooperative Activities

RESPONSE TO THE NATIONAL PARK SERVICE

A. Historic

The final statement reflects consultation with the National Register of Historic Places and includes a letter of comment from the Colorado State Historical Society.

B. Archaeological

A brief archaeological reconnaissance will be required at Site 1 prior to construction.

ENGINEERING NHPQ CONSULTANTS
NELSON, HALEY, PATTERSON and QUIRK, INC.
102 NORTH CASCADE AVENUE
SUITE 202
COLORADO SPRINGS, COLORADO 80902
303: 475-7660

July 16, 1974

Mr. John A. Green
Regional Administrator
Environmental Protection Agency
Region VIII
1860 Lincoln Suite 900
Denver, Colorado 80203

Dear Mr. Green:

As the Consulting Engineer for the Woodmoor Water and Sanitation District and the Palmer Lake Sanitation District, we have been requested to provide comments with respect to the Draft Environmental Statement for the referenced project. Our comments are broken down into two areas; project costs and other general engineering related comments contained within the Statement.

Project Costs

I. Treatment Plant Cost	Alternative A	Alternative B
	$352,000	$490,000

We believe the environmental impact statement estimate for Alternative B of $420,000 is somewhat low. We feel there is a high probability of encountering cemented sands at the proposed location which is situated entirely above the flood plain of Monument Creek. We have not been able to conduct a thorough soils investigation of the area, but this situation is characteristic in terrain of the type found at Site B. Moreover, there will probably be a lack of natural sealing materials which were available at Site A. The normal siltation process provided a fairly good self-sealing material for construction at location A. In addition to these factors, additional facilities must be provided, for safety purposes, due to the remote location of Site B. Since Site A was located very close to a frequently traveled road, such features were not absolutely necessary at that site.

II. Power to Site	Alternative A	Alternative B
	$ 1,200	$ 10,000

These costs were not specifically identified within the original environmental impact statement; however, since there is a wide variation in the cost for power between the two sites, we have separated them for purposes of clarity. Location B is remote from a power source, consequently extensive line construction will be required to provide power to this site.

III. Access Road	Alternative A	Alternative B
	-0-	$ 36,000

Alternate B will require the construction of an access road approximately 4,500 feet in length. It is our opinion that the minimum cost for construction of this road will be approximately $8.00 per lineal foot. Because access must be available to the site on a daily basis, it is extremely important that the access road be constructed to standards which will allow for snow removal during the winter months. We believe a gravel access road must be constructed with a minimum right-of-way of fifty feet. Right-of-way costs are not included in our estimate of $36,000 for this item. These costs are considered later under "Land Costs".

IV. Interceptors	Alternative A	Alternative B
	-0-	$108,000

Our estimate for this item differs substantially from that shown in the original environmental impact statement. Our estimate is based on an estimated length of 4,500 lineal feet of 18 inch diameter pipe. We estimate the cost per lineal foot, including manholes, to be $24.00 per foot, the higher costs being due primarily to the fact that extremely difficult digging will probably be encountered along the higher route proposed to Site B.

V. Subtotal	Alternative A	Alternative B
	$353,000	$644,000

VI. Contingencies	Alternative A	Alternative B
	$ 35,000	$ 64,000

VII. Total	Alternative A	Alternative B
	$388,000	$708,000

VIII.	Engineering and Legal	Alternative A	Alternative B
		$ 58,000	$129,000

Alternate B costs include previous engineering expenditures for the design and planning of Alternate A, the new engineering design and inspection costs for the facility based on an estimated construction cost of $708,000 and the legal fees associated with Alternate A. Legal fees would probably not change with respect to the legal aspects of the construction contract for Alternate B.

IX.	Land Costs	Alternative A	Alternative B
		$ 18,000	$ 85,500

The costs shown in the original environmental impact statement for Alternate B do not take into consideration previous expenditures for the expansion at Site A. The total cost for Alternate B include $45,000 for the purchase of 18 acres of new land for the treatment facility, the purchase of right-of-way necessary for the access road - a total of five acres at a cost of $12,500, plus the previous investment in Site A of $18,000. The costs total $75,000 for land. In addition to this, legal surveys required will cost approximately $5,000 and legal fees associated with potential needs for condemnation of this land may also approach $5,000. The total of these identified costs is $85,500 as shown above for Alternative B.

X.	Other Engineering and Legal	Alternative A	Alternative B
		$ 10,000	$ 10,000

These costs are shown as being identical as we have shown additional engineering and legal costs in the specific item to which they are related.

XI.	Environmental Statement	Alternative A	Alternative B
		$ 15,500	$ 15,500

XII.	Total Costs for Construction, Engineering, Legal Services, and Land Acquisition	Alternative A	Alternative B
		$489,000	$947,500

XIII.	State and Federal Grants	Alternative A	Alternative B
		$354,000	$682,000

XIV.	Local Costs	Alternative A	Alternative B
		$135,000	$265,000

XV. Other Local Costs Not Identified Above

Alternative A	Alternative B
-0-	$ 27,000

The additional costs for Site B accrue through loss of revenue caused by the delay which will be associated with construction at this location. It is our opinion that the minimum additional time to put a plant into operation on Site B would be approximately 270 days. Revenue losses associated with this delay would be approximately $100.00 a day for a total of $27,000 during the entire period.

There will be many other hidden costs associated with locating the facility at Site B. These costs include the loss of the previous investments in Site A, which exceed $50,000. Additional expenses may accrue because of the high probability that the Monument Sanitation District will not participate in the joint use of a new facility, owing to that District's limited funds which are currently available. In addition to these considerations, administrative, legal, and engineering fees which at this time cannot yet be identified should be taken into account. We believe the cost differential shown to be a conservative estimate of the cost differences, and that they will in all probability exceed those costs as projected.

General Comments

Page 8, Soils and Geology

Within this discussion mention is not made of the Arkose or cemented sandstones which are found in many areas at or near the ground surface. Such formations are frequently found adjacent to streams, which is where the project is proposed. This condition could significantly increase project costs, even beyond those costs previously projected in this letter.

Page 17, County Zoning Ordinance

As stated, the Board of County Commissioners must approve the location of any new treatment facility. All three County Commissioners voted against locating the facility at Site B as members of the Pikes Peak Area Council of Governments. Securing their approval for Site B as required would seem highly improbable at the present time.

Page 18, Major Project Objectives

Regarding the Major Project Objectives as stated in items 1, 2, and 3 on Page 18; it is our opinion that selection of Site B is inconsistent with each of the above mentioned objectives in the following respects:

1. Construction of a joint facility would result in a more reliable facility, providing a higher degree of treatment; thereby insuring a higher degree of protection to stream and underground waters within the area.
2. The environmental impacts associated with construction of a Woodmoor-Palmer Lake facility at Site B are obviously greater that those associated with the proposed Site A. Specifically the following must be considered:
   - * Two facilities will be in existence if Site B is chosen
   - * Site B construction will require traversing by vehicle on a daily basis approximately 3/4 of a mile of previously only infrequently occupied property.
   - * We concur with all comments made in the Environmental Assessment as they relate to other comparative Environmental aspects which result in the recommendation of Site A.
3. The most cost effective proposal is, as indicated within the Statement, the construction of the facility at Site A.

Page 21, (2) Service Area 2.

The service area as described in Figure 4 is incorrect with respect to the total area which could be serviced by locating the facility at Site B. By crossing Teachout Creek to the South immediately East of I-25, a much larger area can be serviced by a gravity system than that shown within the Statement.

Page 35, 6 - EPA Comment

The additional Service Area associated with Site B is incorrectly defined.

Page 36, 7 - EPA Comment

Savings by utilization of Site A in our opinion would be approximately $485,000.

Page 36, 8 Additional Advantages as Seen by EPA

Savings in time by selection of Site A will be approximately 270 days.

Page 38 Item 4

Reference is made to the following statement "The capability of the plan to meet standards beyond its initial 7000 population design is also questionable." Refering to Page 25, paragraph 4, the following statement is quoted, "The hydraulic capacity of the facility would be adequate for a population of approximately 13,000 persons". The treatment capacity could be expanded about 1984 - 1985 by means of additional aeration grids to accommodate the additional population".

We believe that adequate area is available at Site A for construction of facilities required until 1990 and that additional land would not be required for expansion prior to that time.

Page 38, Item 5

Reference to a 8 - 10 year design life for Site A facilities is, in our opinion, not consistent with previous statements, or our evaluation of the project. We believe the project life to be a minimum of fifteen years and in all probability will be in excess of twenty years.

Page 39, Alternate B: Advantages - 1

Present indications are that condemnation will be required to obtain access to and including Site B. This will contribute to the additional time required to put a plant into operation at this location.

Page 39, Item 4

Additional Service area referred to is incorrect. Also, Higby Road lift station is not required for Site A, but was installed only for reasons of conserving funds at the present time.

Page 43, Item 8

We do not agree with cost shown. See previous comments.

Flood Protection

The facility proposed is adequately protected from flooding for a flow up to 20,000 C.F.S. The proposed construction will not add to upstream flooding, due to backwater constrictions caused by intrusion into the flood plain. Backwater effects caused by the road and bridge located immediately north (upstream) of the facility are the overriding factor in backwater determinations.

The existing lagoon will be affected by major flows in Monument Creek; however, not to a significant degree in our opinion. The existing lagoon will be innundated and will incur some erosion damage during a one hundred year frequency flood. This will be reduced compared to the previous occurrence in 1965, by the protection provided by the construction of the new facility and the addition of erosion protection along the west embankment of the existing facility.

We do not feel complete protection of the old facility is economically justifiable nor warranted, for two reasons. First, sewage in this portion of the facility will be of a high quality and little pollution will be added to flood waters. Second, damage would be minor, repair costs minimal, and the facility would still provide an acceptable level of treatment while repairs were made. Using the argument that because there is a *possibility* that a facility already in existence *may* be damaged some time in the future by flooding justifies abandonment at the present time does not, in our opinion, represent good Engineering practice.

Site Area Information

Aerial photographs illustrating the present conditions around the proposed site are enclosed with this letter. Also included is a list of property owners as well as a drawing depicting the property relationships around the proposed site.

Photographs numbered 11, 14, and 16 have additional information shown on the face of the photograph. A legend is shown on the back and on all photographs, additional information is again shown on the back.

If you have questions concerning our comments, please feel free to call.

Very truly yours,

NELSON, HALEY, PATTERSON and QUIRK, INC.
Colorado Springs, Colorado

Gary R. Windolph

Gary R. Windolph, P.E.
General Manager

GRW:ljm

Enclosures, As Noted

RESPONSE TO NELSON, HALEY, PATTERSON AND QUIRK, INC.

EPA has reviewed the cost information submitted by NHPQ and finds that it provides more detailed information regarding costs and construction problems than was available in the environmental assessment. More specifically, the following pertinent information was supplied: (1) construction problems associated with Site 2, but not identified in the assessment, (2) costs of power to Site, also not identified in the assessment, (3) required right-of-way and cost of access road and (4) cost of extending interceptor from Site 1 to Site 2 and associated construction problems.

The total costs for Site 2 as estimated by NHPQ ($947,500) differ substantially from those estimated by CH2M ($723,000). EPA believes this to be because of the fact that NHPQ has been intimately associated with the project for a period of several years and is more familiar with construction conditions likely to occur in the project area. Because of these factors the difference in the estimates is not considered unreasonable. Even if the CH2M estimate of $723,000 is considered more accurate, the required mill levy for 1975 is estimated to be 30.7 mills which is sufficient to establish financial infeasibility.

Frank Kapple

LIT Frank Kapple
1400 Regatta Lane 0120
Monument, CO 80132
(303) 481-2735

7/17/74

Enviromental Protection Agency
Region VIII
Denver, Colo.

Dear Sirs:

As a resident of Woodmoor Sanitation Dist. I wish to express my views on the sight location controversy after attending the full hearing on the night of 7/16/74 and then again carefully reviewing the actual sights under consideration today.

Your agency has apparently considered the problem from three primary points of view, (1) Enviromental Impact, (2) Economic Impact, and (3) Social Impact. From all that was said it is clear that you agree with all authorities that there is at least a slight advantage to sight (1) in category (1) and a decided advantage to sight (1) in category (2). The fact that you gave a tentative recomendation to sight (2) must mean that you thought the social advantages of sight (2) were so great that they overwhealmed the advantages of sight (1) in categories 1 & 2.

From the actual sight I have tried hard to see what the social disadvantages are for sight (1). I find that there are only three residences that have a view from any of their windows of the present lagoon. One of these is a small trailer home whose length of time on its present sight I was unable to establish. The other two are very new homes, one built in the past year and the other built since the lagoon was established. It is clear that these owners had full knowledge of the present lagoon and should have had knowledge of the expansion plans prior to building on their sights. Their are five other residences, all quite new and I believe built since the lagoon was established, that are in such a location that it is possible that the lagoon can be seen from a part of their property but not from a normal view window of their house.

It is quite clear that at the time the Monument Lagoon was established and even when plans were made for the joint facility at sight (1) the social impact upon residences other than the posible owner of the trailer, was almost nil, and certainly no greater and in fact probably less than the impact upon the residences within a half mile of sight (2).

Frank Kapple

LIT Frank Kapple
1400 Regatta Lane ↄ120
Monument, CO 80132
(303) 481-2735

It would be helpfull to those citizens of the three sanitation districts that will have their sewage costs increased very substantialy, if the specific social costs that would be sustained by sight (1) and not by sight (2) could be clearly identified and quantified in some way so that their impact could be compared to the adverse impact of sight (2) in enviromental and economic factors.

It is possible that your agency did not consider the fact that seven of the eight residents who might suffer adverse social impact, are in the economic upper-middle or above, class and built their homes after the lagoon was located while at least 1,500 of the 2,800 residents that will be severely hurt by the excess cost of locating the facility at other than sight (1) are of the lower middle or less, class economically.

It is my expectation that when you have considered all the facts that you will give your final approval to sight (1) and that this will be done very promptly so that the cost to Palmer Lake can begin bringing in revenue as soon as possible.

Sincerely yours,

Frank Kapple

RESPONSE TO FRANK KAPPLE'S LETTER OF 7/17/74

EPA considered the problem from environmental, economic, and social impacts as stated in Mr. Kapple's letter. Based on the available information, the tentative recommendation in the draft statement was to utilize Site 2 for construction of the facility. In making this recommendation, a great deal of weight was given to social or human factors, but it was recognized that there were significant problems to be resolved before the site could be utilized.

At the time the Monument lagoon was established its environmental impact was minimal as there were no residences in the area.

Based on testimony received at the public hearing and on comments on the draft statement, EPA has recommended in the final statement that Site I be utilized.

Frank Kapple

LITT Frank Kapple
1400 Regatta Lane)120
Monument, CO 80132
(303) 481-2735

7/30/74

RECEIVED
AUG 2 1974
OFFICE OF REGIONAL ADMINISTRATOR

Enviromental Protection Agency
Region VIII
Denver, Colo.

Dear Sirs:

As a resident of the Woodmoor Sanitaion District I have attended the hearings at the Palmer Lake City Hall. It is very apparent from the testimony given, that every resident or property owner in the immediate area of the lagoon at site I has ~~been~~ consistently been mislead by Mr. Boddinger and Mr. Hughes who were the prime people that profited from the developement of Pine Hills. In order to be able to claim "City Sewer" for his area, Mr. Boddinger, as president of the Monument Sanitation District, created the system that would cost him the least, and donated the present site I as part of this plan. It is apparent that the Pine Hills purchasers were told that the lagoon was a future park and recreation lake site and not told that the lagoon had been given to the Monument San. Dist. as a permanent sewage treatment sight as a result of plans laid back as far as 1962 and that the deed was recorded on 8/19/64, almost ten years ago.

As evidence of the misleading practices of Mr. Boddinger, He said in the second session of the hearing that he had given the lagoon site only so long as it was used as a "quiet" lagoon. The deed in your records recorded Aug. 19, 1964 in Book 2029 on page 956 says " so long as the land is used for an oxidation pond, sometimes referred to as a 'lagoon' in connection with the operation of the sewer system of said Monument Sanitation Dist. or its Assigns". An oxidation pond as the term was used in 1964 clearly reffers to a pond through which air is forced to stimulate the oxidation of sewage waste. This man is clearly an exploiter of the worst order and the owners of Pine Hills have every reason to complain and I would hope, collect damages against him.

On the other hand, as was brought out in the statement by county comissioner Stan Johnson, Mr. Owens who has lived on the sight since 1907 is the only resident who lived within a half mile of the sight when the lagoon was established as a sewage treatment sight in 1964. One residence, a trailer was located very close to the lagoon in 1970 two were built within a half mile in 1971 and the last two in 1973, it is vey clear that these people knew of the lagoon and they certainly should have known of its use and ownership by the Monument Sanitation District. How any agency could want to impose upon Mr. Owens, the only legitimently injured person by site I, and take over his property against his will to create a sewage facility at site II is beyond understanding.

Frank Kapple

Frank Kapple
LI 1400 Regatta Lane 30120
Monument, CO 80132
(303) 481-2735

Another point that should be brought to your attention is that four of the five homes built within a half mile of sight one are clearly built by people in the economic class of upper middle or higher, while more than 1500 of the 2800 people whos taxes for sewer service would be more than doubled by abandoning site I for site II are in the lower middle or less economic class. It is apparent that they are the ones that need protection in this case.

The Palmer Lake area are being forced to coninue with a very serious health hazzard due to the delay that has alredy occured because of the unreasonable interference of Mr. Boddinger, please act fast to reduce to a minimum the serious potential hazzard to this community.

Sincerely yours,

Frank Kapple

cc Congressman W. Armstrong

Dear Mr. Armstrong:

Perhaps the E.P.A. needs some pressure from your office to help avoid a local "Watergate" on the matter of this letter.

RESPONSE TO FRANK KAP[illegible]'S LETTER OF 7/30/74

Testimony at the public hearing on the project indicated that at least some of the purchasers in Pine Hills were led to believe that the site of the existing lagoon would be a park and recreation lake. According to testimony of Mr. Bodinger, 95 percent of the lots in Pine Hills were sold by 1959.

Apparently, lots in Pine Hills were sold on an installment contract basis with the purchaser not receiving the deed until final payment on the contract. The fact that the vast majority of the deeds recorded in Pine Hills within one-half mile of the Site I have been recorded subsequent to establishment of the lagoon does not establish that purchasers of lots in Pine Hills were (1) misled when they purchased the land and (2) made the purchase with knowledge of the existing lagoon. On the contrary, it would appear that at the time Pine Hills was 95 percent sold out, there was no evidence to establish that some years hence a sewage treatment lagoon would be established in the area. We have concluded on the basis of available information that the purchasers of lots in Pine Hills made purchases with the expectation that the area would remain residential. The protective covenants established for Pine Hills also indicate the area to remain residential with the covenants being declared to "run with the land." The hearing established, however, that Mr. Bodinger was instrumental in establishment of the existing lagoon at Site I.

The term oxidation pond does not necessarily imply a pond through which air is forced to stimulate the oxidation of sewage waste.

The fact that homes have been built within site of the existing lagoon does not necessarily imply a desire to live near a sewage treatment facility. It is not as simple, as was stated at the public hearing, to just stop payment on the contract, and the land, especially if one's contract was near an end.

We agree that location of the facility on Mr. Owens' property would be to his disadvantage. However, it should also be pointed out that Pine Hills property owners feel it is to their disadvantage to have the facility in Pine Hills.

We concur that there is an existing health hazard in Palmer Lake because of the existing septic tank system failures.

Town of Palmer Lake

Palmer Lake, Colorado 80133

RANDALL W. WARTHEN,
Mayor

ARLENE KRUEGER,
Treasurer & Clerk

TRUSTEES:
DUANE C. HANSON, Mayor Pro Tem
KEITH I. BECKMAN
CLAIR Y. BRENNEMAN
DONALD A. CHAPMAN
BRYCE X. FOLLMER
FRANCES M. VANAKEN

July 23, 1974

Dear Mr. Webster:

Am very sorry about not being able to give you the grand tour of Palmer Lake, but was unable to get the day off. You will never know how much I appreciate...your interest and concern enough to make a special trip to see for yourself.

I'm sure Kevin Jones and Roger McCammon will be able to show you our troubled and concerned spots (all over town).

I was chairman of Parks and recreation for 26 months and have a park under construction next to Monument Creek, which disturbes me very much. We have three Church camps here plus our own children and the creek is the favorit spot to play in , a real fun place, but knowing sewer drains into it my question is how do you keep 20 to 30 children at once out of the creek.

Last summer Palmer Lake held our yearly clean up day and planted 500 plants to help prevent erosion on the one way road behind the Glen Side store and the one way out of the Glen and not until then did I really realize our real trouble. My son and I dug and planted and he complained about the smell, but not until I scratched my nose did I really know what I was smelling and it sure was'nt roses.

We have one family I know Jay Evans living up town who has so much trouble the kids cant flush the toilet with out asking first. They cant have company due to this trouble and the smell and sewer trouble. The town cant even install a water meter because the sewer is backing up under their house. There is many, many homes in Palmer Lake with the same problem. The town council hears these complaints all the time.

The Main geological formation in this area is the dawson formation and has layers of hard pan (sandstone or clay) that is nearly impervious to water so the sewage from cesspools and septic tanks cannot penetrate this layer. The soil above these hard pan layers becomes saturated and the sewage must come to the surface.

There is one statement made by Mr Bodinger which I could'nt understand. Never have I heard of a public meeting sending out inviations.

Town of Palmer Lake

Palmer Lake, Colorado 80133

RANDALL W. WARTHEN,
Mayor

ARLENE KRUEGER,
Treasurer & Clerk

TRUSTEES:
DUANE C. HANSON, Mayor Pro Tem
KEITH I. BECKMAN
CLAIR Y. BRENNEMAN
DONALD A. CHAPMAN
BRYCE X. FOLLMER
FRANCES M. VANAKEN

I have taken care of the Palmer Lake Town Hall for 26 months and am still active in it. I have kept a calander all this time of all use of the Hall. The Palmer Lake Sanitation Dist. has met the second Tuesday of each month at 7:30 p.m. and I have attended many of these meetings and never did I find the door locked.

I also know to be facts that the P.L.S.D. has followed every State Law of posting notices in 3 public places because I have placed some of these notices myself to help Mrs Foote.and on special meetings and public hearings the notices are posted and can be read in our papers. News travels fast in a small town.

There are many of us Family owners who have payed our sewer tap and the present 10 mills trying to do our part in getting the system in operation and will not be able to use it due to funds at the present time, but we understand our problems here so no complaints, but let us go to 20 plus mills more delay I'm afraid the top will be blowen off. We all feel like we are sitting on a keg of dynamite.

With a late phone call found out I will be able to help give you the grand tour, but want to say thank you once again for your interest.

Sincerely

Frances M. Vanaken
Mrs Frances M. Vanaken
Councilwoman

RESPONSE TO FRANCES M. VANAKEN

EPA has recommended construction at Site I based on evaluation of testimony at the public hearing and comments received on the draft environmental statement.

RECEIVED
JUL 23 1974
OFFICE OF REGIONAL ADMINISTRATOR

Monument, Colo. 80132
July 22,1974

Mr. John A. Green, Regional Administrator
Region Vlll, Environmental Protection Agency,
1860 Lincoln St.
Denver, Colo.80203

Dear Mr. Green:
Regarding the E.P.A. statement; and the relocation of the lagoon.

Your only accomplishment would be putting the same plant in the midst of a different group of people. We do not believe this is a sufficient reason,and we will oppose on these grounds, also.

We own the land where the proposed #2 site is located. We have no intention of selling for sewage disposal. It would have to be condemned, and we will fight.

Present plans and development were made without any consultation with us.

We sold the land at the present site of the lagoon; with the understanding that Mr. Bodinger would build a lake and recreation area. If Pine Hills sold these lots with the same understanding, then Pine Hills should be responsible to those people.

When we learned Pine Hills was going to put a lagoon there instead of a park, we protested to the County authorities; to no avail.

Despite the fact you people have prepared a rather elaborate statement; you have for some reason ignored all logic, perhaps following a suggestion? If infact it proves important to move from site #1; the only logical location will be #3. Which could serve any possible future development. This is so obvious it does not require a study. neither do we believe it good planning to have several plants serving a small area.

Please enter this letter into the record of public hearing on this draft, Environmental Impact Statement.Held July 16- 22,1974

Yours truly

Owners.

E. J. Owens
Mable I. Owens

RESPONSE TO MR. & MRS. EVANS

The final statement recommends that the facility be constructed at Site I. Site 3 was considered but rejected primarily because of its cost and total inconsistency with local planning and land use policies.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE ACADEMY
USAF ACADEMY, COLORADO 80840

RECEIVED
JUL 24 1974
OFFICE OF REGIONAL ADMINISTRATOR

REPLY TO ATTN OF: DE

23 JUL 1974

SUBJECT: Draft Environmental Statement, Palmer Lake Sanitation District (Your Ltr, 19 June 1974)

TO:
United States Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

1. The Air Force Academy has reviewed the above Draft Environmental Statement with special interest because this military installation is located downstream from the proposed Waste Water Treatment Facility. The proposed action, or the lack of action, will have a direct influence on our environmental objectives. The following are submitted for your consideration:

a. Recommend that the number of treatment facilities upstream from the Academy be held to a minimum because increased operation and maintenance problems of multiple treatment facilities are inherent.

b. Recommend selection of Site 1 because of potential delay in accomplishment of satisfactory sanitary conditions if any other site is selected.

2. The Statement is believed to be adequate. Thank you for the opportunity to submit comments.

Donald R. Reaves

DONALD R. REAVES, Col, USAF
DCS/Civil Engineering

RESPONSE TO COLONEL REAVES

The final statement recommends construction at Site I. This would also result in the minimum number of treatment facilities upstream from the Academy.

"MAN'S FLIGHT THROUGH LIFE IS SUSTAINED BY THE POWER OF HIS KNOWLEDGE"

COLORADO DEPARTMENT OF HEALTH

4210 EAST 11TH AVENUE • DENVER, COLORADO 80220 • PHONE 388-6111
Edward G. Dreyfus, M.D., M.P.H. Executive Director

July 22, 1974

From: Colorado Department of Health

COMMENTS ON THE PALMER LAKE SANITATION DISTRICT'S DRAFT ENVIRONMENTAL IMPACT STATEMENT

First, the department would like to reiterate to the EPA that the Colorado Water Quality Control Commission has exclusive and final authority, as designated by Colorado Statutes CRS Section 66-28-704 (Colorado Water Quality Control Act), in approving or disapproving the site location of any sewage treatment works in the State of Colorado.

Additionally, Section 66-28-704(2) of the Act states:

> "In determining the suitability of a site location for any sewage treatment works, the commission shall consider the long-range comprehensive planning for the area and the consolidation of sewage treatment works to avoid a proliferation of small sewage treatment works."

In the site location (referred to as Site 1 in the EIS), approved by the Commission in February, 1972, which also received recommendations of approval from the El Paso County Health Department, Planning Commission, Board of Commissioners and the Pikes Peak Area Council of Governments (PPACG), the sanitation districts of Palmer Lake, Monument, and Woodmoor agreed to consolidate their treatment facility needs and selected Site 1 for their regional plant. However, as indicated by the districts, the recommended Site 2 alternative would seriously jeopardize the plans for consolidation.

In response to the specific areas of comment:

1. Site 1 is consistent with local land use and planning policies; whereas Site 2 is inconsistent as indicated both in the EIS and previous testimony.

2. The establishment of a buffer zone around Site 2 is not a requirement of either State law nor design criteria of this department, but rather a treatment plant site is originally located so as to achieve this purpose and thereafter any encroachment nearer to the plant site would be of full knowledge to individuals.

3. The additional financial burden placed on the districts is unreasonable and would serve only to delay the project further.

In summary, we do not agree with the selected site alternative and prior to any EPA grant funding for Site 2, a site location approval from the Commission is required. In making a determination on this site location application, the Commission solicts the recommendations of the local reviewing authority, the regional water quality planning authority, in this case the PPACG, as designated by the Governor, and the district engineer for the Water Quality Control Division, in this case Mr. Derald Lang. As indicated by testimony from the local and regional reviewing authorities, their recommendation would seem to be disapproval and the recommendation from Mr. Lang would also be disapproval. Thus, it is very doubtful that Site 2 would even receive site location approval from the State of Colorado.

E. G. Dreyfus, M.D., M.P.H.
Executive Director

EGD:DEL:ef

RESPONSE TO THE COLORADO DEPARTMENT OF HEALTH

1. Concur with this comment.

2. Testimony at the public hearing indicated no possibility of establishing a buffer zone around Site 2. The existing lagoon was established at a time when there were no residences in Pine Hills or the immediate area of the lagoon, and encroachment has occurred subsequent to its establishment. Site I as a location for a permanent facility, however, was felt to be improperly located by at least several dozen persons, one of which felt so strongly that the sanitation districts, the State of Colorado, and the Environmental Protection Agency had failed in their responsibilities, that he filed suit in United States District Court.

3. Concur with this comment.

ORVILLE A. KENELLY
ATTORNEY AND COUNSELOR AT LAW
318 E. COLORADO AVENUE
COLORADO SPRINGS, COLORADO 80903
TELEPHONE 1-303-471-0551

July 29, 1974

Mr. Jerry Raish, Attorney at Law
Environmental Protection Agency
Region VIII
Denver, CO

Re: Project #C-080306, Palmer Lake, Colorado

Dear Sir:

Colorado Senate Bill No. 35 concerns the division of new land into subdivisions. The four communities involved, Palmer Lake, Woodmoor, Monument and Pine Hills were all subdivided prior to Senate Bill No. 35. However, involved is a major improvement in one subdivision by the other three neighborhoods. It would therefore appear that Page 6, Paragraph (d 7), Page 7, Paragraph (d and e 5), Page 8 (c), Page 8 Paragraph 106-2-37, and Page 10, Paragraph 106-2-38, would apply in this instance. It would seem that the intent of all of those paragraphs are to insure that the County Commissioners review detailed plans on any proposed major sewerage system. Since in fact established subdivisions are locating a major system in a fourth established subdivision, i.e. Pine Hills, this new project, which has not yet been built, should come under the review of the County Commissioners. This is particularly true concerning Page 7, Paragraph (d) concerning the standards and technical procedures of this sewer system.

As background, the Palmer Lake service plan was reviewed and approved by the City Planners and City Council and County Council in the Spring of 1971. This was a general plan to provide sewerage for 2,000 people with alternative treatment sites defined. There were no specific facility definitions, i.e., lagoon, tertiary plant, etc. Such a service plan would not comply with the intent with the requirements of Senate Bill No. 35, for a new subdivision. From that service plan was developed a major plan and detailed specific drawings of the type required on Page 6, Paragraph (d 7) and Page 7, Paragraph (d). These details would handle 11,844 people rather than the 2,000 people of the general service plan approved by the County Commissioners. These detail plans have been approved by the State Board of Health, but they were never submitted in accordance with Senate Bill No. 35 for review at the County level. Consequently, the provisions of Page 10, Paragraph 139-59-25 of Major Activity Notice, have never been accomplished at the local level.

Sincerely,

ORVILLE A. KENELLY
Attorney for Charles Lenfest, et al.

OAK/bjk

RESPONSE TO ORVILLE A. KENELLY

EPA believes that the letter of comment submitted by the Board of County Commissioners for El Paso County on August 2, 1974 establishes that the Commissioners have made an adequate review of the project.

RECEIVED
JUL 31 1974
OFFICE OF REGIONAL ADMINISTRATOR

THE STATE HISTORICAL SOCIETY OF COLORADO

State Archaeologist, 5A Ketchum Bldg., University of Colorado, Boulder 80302

July 29, 1974

Mr. John A. Green
Regional Administrator
United State Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

We are writing to inform you of the need to preserve and protect arhcaeological remains under the National Environmental Policy Act of 1969 and the Reservoir Salvage Act of 1960 (as amended 1974). Together they ppovide financial protection and preservation of any historical and archaeological data (including relics and specimens) which otherwise might be lost or destroyed by "the alteration of the terrain as a result of any Federal construction project or Federally licensed project, activity, or program."

With reference to the planned wastewater treatment facilities in the Palmer Lake - monument - Woodmoor area and it's effect upon the archaeological value to the area, the Office of the State Archaeologist is prepared to contract for a ground level survey to determine what, if any, archaeological evidences exist, in accordance with the aforementioned Federal regulations.

If you are agreeable to finance such a survey, please let us know as soon as possible. The standard consulting fee, established by the State Office is ($50) fifty dollars per man day plus travel and expenses. The job size determines whether or not any additional personnel are necessary.

Sincerely,
Linda Ward Williams
Linda Ward Williams
Staff Archaeologist

Response to State Archaeologist

A brief archaeological reconnaissance will be required at Site 1 prior to construction.

ja

RECEIVED
JUL 17 1974
OFFICE OF REGIONAL
ADMINISTRATOR

THE STATE HISTORICAL SOCIETY OF COLORADO

State Archaeologist, 5A Ketchum Bldg., University of Colorado, Boulder 80302

Mr. John A. Green
Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

I am writing in review of the Environmental Impact Statement for the Palmer Lake Sanitation District, Project No. C080306.

I agree with the statement'a assessment of the archaeological situation. "An archaeological reconnaissance of the area would be required prior to construction." What I find confusing is the statement elsewhere (Figure 6) that an interceptor line is presently under construction. This suggests to me that the actual on the ground construction is out of phase with the Impact Statement and that the latter may primarily serve as lip service to NEPA. If construction is actually under way then an archaeological survey should be initiated immediately. ✓

In addition,in view of the proposed population growth of the region, I recommend that the entire area of the Woodmoor, Pine Hills, Panoramic Acres, subdivisions be surveyed for archaeological remains. Currently the area has a low population and such a survey could be easily accomplished. Once the population increases sites will increasingly be destroyed by week end diggers.

Sincerely,

James J. Hester

James J. Hester
Acting State Archaeologist

Response to State Archaeologist

A brief archaeological reconnaissance will be required at Site 1 prior to construction.

ja

RECEIVED
MAY 1 1974

THE STATE HISTORICAL SOCIETY OF COLORADO
State Archaeologist, 5A Ketchum Bldg., University of Colorado, Boulder 80302

April 30, 1974

John A. Green, Regional Administrator
United States Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

Our files have no information concerning archaeological sites in the Palmer Lake Sanitation District of El Paso and Douglas Counties, Colorado. This, however, is more a statement of the lack of any comprehensive archaeological site inventory program for the two counties than an acknowledgement of no archaeological sites in this area. Frankly we do not know what may be affected by the planned construction indicated in your 26 April 74 letter. 8F - [illegible]

For this we feel the most suitable course of action would be to have a professionally conducted on-the-ground archaeological reconnaissance. This would allow for proper documentation of prospective archaeological resources, and an opportunity to comment substantively about any potential for archaeological resource damage expected as a product of construction activity.

Based entirely on the maps provided, 2 archaeologists could totally cover the district area in about a day or a day and a half. Depending on the reconnaissance results, another half day or day period would be required for report compilation.

Cost estimates for this research would vary among State institutions having the needed personnel. Nonetheless, a ballpark figure of $50.00 a day per investigator plus expenses, to include meals, purchase of expendible equipment (i.e., film, magic markers, maps, etc.), and travel (@ .15/mile), is realistic.

If we can be of further assistance, please feel free to contact us.

Sincerely,

Marvin Kay

Marvin Kay
Staff Archaeologist

Response to State Archaeologist

mt
A brief archaeological reconnaissance will be required at Site 1 prior to construction.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION EIGHT
BUILDING 40, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

RECEIVED
JUL 31 1974
OFFICE OF THE
ADMINISTRATOR

July 30, 1974

IN REPLY REFER TO:
08-00.21

Mr. John A. Green
Regional Administrator
U.S. Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

Subject: Draft Environmental Statement
Palmer Lake Sanitation District
Palmer Lake, CO. Proj. C-080306

We appreciate the opportunity to review and comment on the draft environmental statement for the above project. Since we have no comments to offer on the statement, we are returning it to your office for further possible use.

Sincerely,

Daniel Watt
Regional Federal Highway Administrator

F. S. Allison
By: Frank S. Allison, Director
Office of Environment & Design

Enclosure

cc: Courtesy
TES-70 (1)
DOT-(1)
CEQ-(5)

RESPONSE TO FEDERAL HIGHWAY ADMINISTRATION

None Required

PALMER LAKE, COLORADO 80133
August 1, 1974.

U.S. Environmental Protection Agency
Denver Colorado
Office of Regional Council
1860 Linsoln St. Suite 900
Dear Sirs:

I will begin by introducing myself:
I am F.G.Smith, I am a retired Methodist Minister, and I have considered Palmer Lake, Colorado since January 1, 1961. However from October 1962 until July 1967, I served as associate pastor of the United Methodist Church in Grand Junction, Colorado but during the time that I was in Grand Junction, I could be reached through the Post Office at Palmer Lake, For we considered this our home. When Randall Warthan was elected Mayor of Palmer Lake, he ask if I would serve as a member of the Steering Committee, for the Sanitation District. and I served as Secretary of that Committee until the vote was taken and the District was established. Since that time I have attended many of the Board meetings as I have been very much concerned about the sanatary conditions in the Palmer Lake, area.

The facts are that I was in attendaece at the first meeting of the new Board. At that meeting I saw for the first time Brig. Gen. Charles Lenfest. After the Board had taken care of routine business, Mr. Lenfest arose and addressed the chair. He was recognized the chair.He proceeded to inform the body that he objected to the site known as no.1. being the location of the disposal plant. He told of the stench and vowed that he would go to any length necessary to prevent it. At that time the elected chairman of the board, Col. Roger McCammon tried to reason with him and to say that if the modern plant could be errected that it would take care of the complaints that he had made. The Brig.-Gen. was in no way inclined to listen to what the chairman of the Board.

I felt that Col. McCammon was very considerate in the remarks that he made and I was very much surprised to hear the remark made by one woman who was in the party that they were rudly treated. As you remember that remark was made on the meeting on July, 29, 1974.

I was also surprised to hear that Mr. Bodinger had toldthem that that plant was just a temporary situation. He had given the ground for the purpose of a disposal plant and it is too bad if some of the incestors lose money on their investment. However as things are developing there are a good many of in Palmer are also losing and have already lost a great deal of money by the delay and if the plant is moved to site 2, it is going to be a real hardship.

I will say just a word about my own personal situation. When I bought my place in 1954. It was just a cabin. We felt that we could see possibilities in the place. We have enlarged it some and winterized it and now have a very comfortable home. It is nothing elaborate but we do live here very comfortably. There is one objection. Our home is on the hillside and the homes above us have the cesspools and the hillside between us and the homes above us are seeping sewerage and at times when we go up there we can smell the contaminated sewerage leakage.

We probably will not lose as much in dollars and cents if our Board must move to site 2, but it will take about all that we have. As a retired minister I draw some annuity from my Church Conference, which is the Kansas West Conference of the United Methodist Church.we also draw some Social Security (we do not draw the maximum amount) but with the two we are just about able to make bothends meet by being careful

We are now trying to figure out how we can meet the additional cost providing the change to site 2, should come. I speak not only for myself but I might say that there are several retired ministers living in the Palmer Lake, Area. And I do know something about how they feel. But I also know that there are a great many retired people living in this area other than retired ministers and I have the feeling that their situation is very much the same as ours. And the delay and any additional cost if going to be serious with each of us.

I attended all three of the meetings that the E.P.A. held in the Palmer Lake Town Hall. I do appreciate the attitude of the representatives of the individuale who represented E.P.A. I will repeat that we the people of Palmer as individuals may not lose as much as individuals as some of the others said that they would lose if the site remains at sight one but if it should go to site two, we are indeed be estremely hard pressed. Inflation has taken most of the reserve that we did have and we are really put to the wall.I might say that any reserve that we could save was very small to begin with.

Yours Truly.

Rev. Frederick G. Smith
P.O. Box 103
Palmer Lake, Colorado 80133

Frederick G. Smith

RESPONSE TO REVEREND SMITH

The final statement recommends construction at Site 1.

VAETH

JOHN C MITCHELL, JR.
Chairman

BOARD OF COUNTY COMMISSIONERS
EL PASO COUNTY
COLORADO SPRINGS, COLORADO

RECEI
AUG 1974
OFFICE OF REGIONAL
ADMINISTRATOR

August 2, 1974

Mr. John A. Green
Regional Administrator
United States Environmental Protection Agency
1860 Lincoln Street
Denver, CO 80203

Dear Mr. Green:

The El Paso County Board of Commissioners at a public hearing on August 1, 1974, reviewed the draft statement for the Palmer Lake Sanitation District proposal. The Board unanimously (3-0 vote) recommended the expansion of Site 1.

In the process of arriving at that decision, the Board reviewed sixteen aspects of the three proposed sites. Attached is a summary page of those concerns.

The Board in analyzing these facts felt that the following were the most important reasons for the selection of Site 1:

1. The Planning Commission on May 12, 1971, and the Board of County Commissioners on May 17, 1971, reviewed the service plan for the Palmer Lake Sanitation District. Both bodies recommended Site 1.

2. Site 1 represents the most practical and expedient means to meet an existing health hazard problem in the affected service area.

3. If Site 2 or 3 were selected there would be obvious delays with respect to engineering, land acquisition, added length of conduit, access problems, and, most importantly, the increased financial burden on the three governmental entities involved.

4. If Site 2 or 3 were selected, it would open up a considerable amount of land area that would lay the groundwork for increased population in the affected area. This expansion would not conform to existing zoning or the adopted El Paso County Land Use Plan.

Mr. John A. Green
Continued, page 2
August 2, 1974

Thank you for the opportunity to review the Environmental Statement. If you have any other questions, please feel free to contact the Board.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
EL PASO COUNTY

John C. Mitchell, Jr.
CHAIRMAN

JCM:jw

Attachment

RESPONSE TO EL PASO COUNTY COMMISSION

EPA has recommended construction at Site I based on evaluation of testimony at the public hearing and comments received on the draft environmental statement.

SUMMARY OF ENVIRONMENTAL IMPACT STATEMENT FOR PALMER LAKE SANITATION DISTRICT

(FACTORS TO BE CONSIDERED)

	Site 1	**Site 2**	**Site 3**
Conformance with approved special district service plan	Conforms Planning Commission approved May 12,1971 County Commissioners approved May 17, 1971	Non-conformance	Non-conformance
Zoning Conformance	Conforms	Non-conformance (5 acre zoning)	Non-conformance (5 acre zoning)
Access	County Maintained Road	Requires Right-of-Way Acquisition	Requires Right-of-Way Acquisition
Compliance with county adopted Land Use Plan	Conforms	Non-conformance 4,000-5,000 pop. increase	Non-conformance
Timing	Minimal	Several months	Several months
Development Cost	Minimal	Costly $135,000 +	Costly Approx. $1,000,000 +
Property Ownership	District Owns	Requires New Acquisition	Requires New Acquisition
Existing Impact	Platted Subdivision 3 Dwelling Units Existing ¼ mile radius 10 Dwelling Units ½ mile radius	Unplatted Visible I-25 & Southeast Pine Hills Subdivision	Unplatted Minimal Impact
Health Hazard Potential	Minimal	Potential Problem	Potential Problem
Noise	Requires Noise Suppression	Minimal	Minimal
Odor	Potential Problem	Potential Problem	Minimal Problem
Natural Habitat	Minimal Impact (Retain Marsh Area)	Induces Disturbance	Induces Disturbance
Flood Hazard	Definite Hazard	Minimal Potential Hazard	Minimal Potential Hazard
Site Expansion Capabilities	Constricted Topo & Monument Creek	Meets Interim & Long Term Needs	Meets Interim & Long Term Needs
Site Treatment Capabilities	Limited Technology Improvements Could Ameliorate This Situation	Excellent	Excellent
Waste Water Recycling Potential	Greatest Potential	Minimal Potential	Minimal Potential

#71270-03-014 Pine Hills Add. #4 Block 3 Lot 12 Owner: Bliss Deed Recorded: Oct. 1967 No Imps. Land Assessed: $1,050.00

#71270-03-015 Pine Hills Add.#4 Block 3 Lot 11 Owner: VIK Deed Recorded: March 1971 No Imps. Land Assessed: $1,050.00

#71270-03-016 Pine Hills Add. #4 Block 3 Lot 10 Owner: Pine Hills Inc. Deed Recorded: Aug. 1970 No Imps. Land Assessed: $1,050.00

#71270-04-001 Pine Hills Add. #4 Block 5 Lot 1 Owner: Bodinger & Hughes No Imps. Land Assessed: $1,050.00

#71270-05-001 Pine Hills Add. #4 Block 4 Lot 1 Owner: Horne Deed Recorded: March 1973 No Imps. Land Assessed: $1,050.00

#71220-02-020 Panoramic Acres Tract 3-c Owner: Shive Deed Recorded: Feb. 1971 No Imps. Land Assessed: $1,050.00

#71220-02-021 Panoramic Acres Tract 4-c Owner: Marsoc Deed Recorded: Oct. 1972 No Imps. Land Assessed: $1,050.00

#71220-02-022 Pine Hills Block 3 Lot 6 Owner: Schaffer Deed Recorded: April 1965 No Imps. Land Assessed: $1,050.00

#71220-02-023 Pine Hills Block 3 Lot 7 Owner: Griffith Deed Recorded: Sept. 1966 No Imps. Land Assessed: $1,050.00

#71220-02-024 Pine Hills Block 3 Lot 8 Owner: Knudsen Deed Recorded: Nov. 1966 No Imps. Land Assessed: $1,050.00

#71220-02-025 Pine Hills Block 3 Lot 16 Owner: Wheat Deed Recorded: Oct. 1972 House Built: 1973 Assessed Value: $9,300.00 Land Assessed: $2,400.00

#71220-02-026 Pine Hills Block 3 Lot 17 Owner: Auge Deed Recorded: June 1971 No Imps, Land Assessed: $1,050.00

#71220-02-027 Pine Hills Block 3 Lot 18 Owner: Sibbett Deed Recorded: Dec. 1972 No Imps. Land Assessed: $1,050.00

#71220-02-028 Pine Hills Block 3 Lot 19 Owner: Allen Deed Recorded: Aug. 1972 No Imps. Land Assessed: $1,050.00

#71220-02-029 Pine Hills Block 3 Lot 23 Owner: McCowan Deed Recorded: Nov. 1966 No Imps. Land Assessed: $1,050.00

#71220-02-030 Pine Hills Block 3 Lot 15 Owner: Parker Deed Recorded:--- No Imps. Land Assessed: $1,050.00

#71220-02-031 Pine Hills Block 3 Lot 14 Owner: Marsac Deed Recorded: Nov. 1972 No Imps. Land Assessed: $1,050.00

#71220-02-032 Pine Hills Block 3 Lot 9 Owner: Marsac Deed Recorded: Nov. 1972 House Built: 1973 Assessed Value: $4,590.00 (partial assessment). Land Assessed: $2,400.00

#71220-02-033 Pine Hills Block 3 Lot 10 Owner: Marsac
Deed Recorded: Nov. 1972 No Imps. Land Assessed: $1,050.00

#71220-02-034 Pine Hills Block 3 Lot 13 Owner: Scott
No Imps. Land Assessed: $1,050.00

#71220-02-046 Pine Hills Block 2 Lot 4 Owner: Neff
No Imps. Land Assessed: $1,050.00

#71220-02-047 Pine Hills Block 2 Lot 5 Owner: Dudley &
Erickson No Imps. Land Assessed: $1,050.00

#71220-02-048 Pine Hills Block 2 Lot 6 Owner: Setterwhite
Deed Recorded: Oct. 1972 House Built: 1973
Assessed Value: $5,570.00 (Partial assessment.)
Land Assessed: $2,100.00

#71220-02-049 Pine Hills Block 2 Lot 7 Owner: Rainous
No Imps. Land Assessed: $1,050.00

#71220-02-049 Pine Hills Block 2 Lot 8 Owner: Schiever
Deed Recorded: April 1973 House Built: 1971 Assessed
Value: $5,480.00 Land Assessed: $2,400.00

#71220-02-051 Pine Hills Block 3 Lot 20 Owner: Goss
Deed Recorded: Oct. 1966 No Imps. Land Assessed: $1,050.00

#71220-02-052 Pine Hills Block 3 Lot 21 Owner: Howard
Deed Recorded: Oct. 1966 No Imps. Land Assessed: $1,050.00

#71220-02-053 Pine Hills Block 3 Lot 22 Owner: Koos
Deed Recorded: Oct. 1967 No Imps. Land Assessed: $1,050.00

#71220-02-054 Pine Hills Block 1 Lot 18 Owner: Partridge
No Imps. Land Assessed: $1,050.00

#71220-02-055 Pine Hills Block 1 Lot 17 Owner: Miller
Deed Recorded: May 1967 No Imps. Land Assessed:$1,050.00

#71220-02-056 Pine Hills Block 1 Lot 16 Owner: Onila
No Imps. Land Assessed: $1,050.00

#71220-02-057 Pine Hills Block 1 Lot 15 Owner: Tillquist
Deed Recorded: Sept. 1973 No Imps. Land Assessed: $1,050.00

#71220-02-060 Pine Hills Block 1 Lot 13 Owner: Lucas
Deed Recorded: April 1958 No Imps. Land Assessed: $1,050.00

#71220-02-061 Pine Hills Block 1 Lot 12 Owner: Camp
Deed Recorded: Jan. 1962 No Imps. Land Assessed: $1,050.00

#71220-02-062 Pine Hills Block 1 Lot 11 Owner: Healey
No Imps. Land Assessed: $1,050.00

#71000-00-117 54.66 ac. SE4 Sec. 28, Lying west of D. & R. G. R. O. W. Owner: Severs & Morrisey Deed Recorded: Nov. 1972 No Imps. Land Assessed: $1,550.00

#71000-00-147 241 ac. in Sec. 23, 26, & 27 Owner: Owens House Built: 1905 Addition Added: 1947 Assessed Value Imps: $1,230.00 Land: $3,510.00

#71000-00-148 5 ac. Tract in NE4 Sec. 27 Owner: Hausmann Deed Recorded: July 1970 Mobile Home Here Since 1970 Land Assessed at: $1,710.00

#71270-01-001 Pine Hills Add. #4 Block 2 Lot 3 Owner: Monument San. Dist. Deed Recorded: Aug. 1964

#71270-01-002,003,-004,& 005 Block 2 Lots 1,2,4,5 Owner: Bodinger & Hughes No Imps. Assessed Value of Lots: $1,050.00 each

#71270-02-001 Pine Hills Add. #4 Out Lot: A Owner: Adams Deed Recorded: Dec. 1972 No Imps. Land Assessed: $1,050.00

#71271-02-001 Pine Hills Add. #4 Block 1 Lot 6 Owner: Hill Deed Recorded: Dec. 1972 No Imps. Land Assessed: $210.00

#71270-02-009 Pine Hills Add. #4 Block 1 Lot 9 Owner: Geyer Deed Recorded: Dec. 1967 No Imps. Land Assessed: $1,050.00

#71270-02-010 Pine Hills Add. #4 Block 1 Lot 9 Owner: Geyer Deed Recorded: Dec. 1967 No Imps. Land Assessed: $1,050.00

#71270-02-011 Pine Hills Add. #4 Block 1 Lot 8 Owner: Hughes Deed Recorded: Sept. 1971 No Imps. Land Assessed: $1,050.00

#71270-03-001 Pine Hills Add. #4 Block 3 Lot 7 Owner: Tangen Deed Recorded: Oct. 1967 No Imps. Land Assessed: $1,050.00

#71270-03-002 Pine Hills Add. #4 Block 3 Lot 6 Owner: Lenfest Deed Recorded: June 1970 House Built: 1971 Assessed Value: $3,630.00 Land Assessed: $2,400.00

#71270-03-004 Pine Hills Add. #4 Block 3 Lot 9 Owner: Parry Deed recorded: April 1971 No Imps. Land Assessed: $1,050.00

#71270-03-005 Pine Hills Add. #4 Block 3 Lot 5 Owner: Pine Hills Inc. Deed Recorded: Jan. 1972 No Imps. Land Assessed: $1,050.00

#71270-03-006 Pine Hills Add. #4 Block 3 Lot 4 Owner: Blanchard Deed Recorded: Oct. 1967 No Imps. Land Assessed: $1,050.00

#71270-03-013 Pine Hills Add. #4 Block 3 Lot 13 Owner: Hancock Deed Recorded: June 1968 No Imps. Land Assessed: $1,050.00

RECEIVED
AUG 15 1974
OFFICE OF REGIONAL ADMINISTRATOR

THE STATE HISTORICAL SOCIETY OF COLORADO
Colorado State Museum, 200 Fourteenth Avenue, Denver 80203

August 13, 1974

Mr. John A. Green
Regional Administrator
United States Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

RE: Palmer Lake-Monument-Woodmoor Sanitation District

Dear Mr. Green:

The statement seems to adequately present the historical and archaeological resources of the area. The consideration of the effects of later development resulting in part from the Sanitation District are rather astute and most serious from the standpoint of the slow erosion of historical remains.

Provided that the district is implemented as described, we have no objections to the proposal.

Sincerely,

Cynthia Emrick

Cynthia Emrick
Preservation Assistant

cc: Senator Jackson
Representative Edmonds

RESPONSE TO THE COLORADO HISTORICAL SOCIETY

Site I has been recommended in the final statement. No historical resources will be distrubed by construction at Site I.

RECEIVED
MAY 14 1974
OFFICE OF REGIONAL ADMINISTRATOR

R8-1184

THE STATE HISTORICAL SOCIETY OF COLORADO
Colorado State Museum, 200 Fourteenth Avenue, Denver 80203

May 13, 1974

John A. Green
United States Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

The following sites would seem to be of concern on your project for the Palmer Lake Sanitation District.

Palmer Trails-series of 10 around front range & Colorado Springs
T.12S T.14S
R.67W R.68W
Monument Nursery 39° 05'
104° 56'
McShane's Ft.-on Michell Richardson Ranch, 2 Mi. from center of Palmer Lake & 1 Mi. from Monument
Columbine Park-south section of Palmer Lake town limits
Murat House-Glenarm & Highland Road, Palmer Lake
Estemere-Glenside Rd & Glenway, Palmer Lake
McIntyre House-Glenside Road, Palmer Lake
Butterfield Overland Dispatch-Smokey Hill Trail
D & RG Railroad-Colorado Midland Railroad
Goodnight Cattle Trail-Indian Paint Mines at Calhan
Spring Valley Cemetary-east of Monument
Teachout Ranch-Woodman Valley & I 25
Van Briggle Memorial Pottery-Monument Park

We would appreciate your contacting us after having taken into consideration these sites and the effects of your project on them. Our final comments will then be made available to you. Please contact Dr. Lester of the Office of State Archaeologist at the University of Colorado in Boulder, Department of Anthropology, to obtain comments on the archaeological resources of the area.

Sincerely,

Cynthia Emrick

Cynthia Emrick
Preservation Assistant

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1580
ALBUQUERQUE, NEW MEXICO 87103

RECEIVED
AUG 16 1974
OFFICE OF REGIONAL
ADMINISTRATOR

SWAED-EP

13 August 1974

Mr. John A. Green
Regional Administrator
United States Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

The Draft Environmental Impact Statement, Palmer Lake Sanitation District, Palmer Lake, Colorado, has been reviewed as requested in your notice of 19 June 1974. The plan evaluated in the impact statement would not conflict with any existing or contemplated work of the Corps of Engineers. On the contrary, completion of this project will improve the stream quality of Monument Creek and, to a degree, the quality of Fountain Creek. The quality of the water in Fountain Creek will be a significant factor in determining whether a permanent recreation pool will be established behind Fountain Dam which was authorized for construction on Fountain Creek just north of Pueblo, Colorado by Public Law 93-251.

Other environmental impacts related to the Corps' functional area of responsibility and expertise are adequately covered in the statement.

Sincerely yours,

JASPER H. COOMBES, P.E.
Chief, Engineering Division

Response to Corps of Engineers

None Required

RECF D
AUG 13 1974
OFFICE OF REGIONAL
ADMINISTRATOR

Ernestine J Dellacroce
Rt 3 Box 60
Colo Sprgs, Colo 80908

Mr John Green

Dear Sir:

This letter is in regard to the Proposed Wastewater Treatment Facility for the Palmer Lake Sanitation District Project #C080326.

I would like to see the facility moved down to Site 3. I own 300 acres of land that would benefit by the move as would my neighbors who own large parcels of land. could also use it.

As Site 3 is the lowest point on Monument Creek it seems to me the best place for it. Site 2 location is just North of my property. I own 4.8 feet of water rights from the Monument Creek which enters my property from Mr Owens south line & I am concerned about the water that would be used on my property. I could not be served from Site 2. but still I would have all the disadvantages of it being put there. So I recommend that the facility be built on Site 3

Thank you

Yours truly

Christine Dellacroce

RESPONSE TO CHRISTINE J. DELLACROCE

If the only considerations for site selection were those of an engineering and operational nature, then Site 3 would be an excellent location. Selection of this site, however, would be totally inconsistent with land use planning and policies of local governments, as well as being beyond the financial capability of the three sanitation districts.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION VIII
FEDERAL OFFICE BUILDING
19TH AND STOUT STREETS
DENVER, COLORADO 80202

OFFICE OF THE REGIONAL DIRECTOR

[illegible]

August 14, 1974

John A. Green
Regional Administrator, Region VIII
Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

The Department of Health, Education and Welfare has completed its review of the Draft Environmental Impact State for the Wastewater Treatment facilities in the Palmer Lake-Monument-Woodmor area, Colorado.

It appears to us that the potential environmental impacts of the proposed action have been adequately addressed and we would concur with the document as written.

Yours very truly,

Rulon R. Garfield
Regional Director

Response to Department of Health, Education, and Welfare

None Required

STATE OF COLORADO
John D. Vanderhoof, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Grieb, Director
6060 Broadway
Denver, Colorado 80216 (825-1192)

RE
UG 20 1974
OFFICE OF R [illegible]
ADMINISTRATOR

August 14, 1974

Mr. John A. Green, Reg. Administrator
U. S. Environmental Protection Agency
1860 Lincoln St.
Denver, Colorado 80203

Dear Mr. Green:

The Division staff has reviewed the Draft Environmental Statement for the Palmer Lake Sanitation District proposal, Project #C 080306, construction of a waste treatment facility.

In general, it appears the statement adequately evaluates the existing problem and demonstrates the need for proper sewage treatment.

We, as a wildlife agency, normally favor a location that is least consumptive of the habitat which in this case would be site #1 or alternate A. However, if this is only a short-term solution, it appears the overall impact will be less if a facility were to be constructed with a longer life expenctancy which would not require additional construction in the very near future. A lagoon, as stated, of larger capacity will probably encourage additional housing development. These satellite developments often cause a greater impact on wildlife than does the core development as they very often are located on vital deer winter range.

Properly treated increased flows into Monument Creek may have some fishery value depending upon volume, water temperature, etc. We agree, the creek does not presently support a quality fishery. The present marsh does have some value as a waterfowl area and the potential for greater value does exist.

We are cognizant that all possible facets relative to this proposal must be evaluated and are hopeful that the final decision will be the

DEPARTMENT OF NATURAL RESOURCES, T. W. Ten Eyck, Executive Director • WILDLIFE COMMISSION, R. W. Cool, Chairman
Charles A. Gebauer, Vice Chairman • Dr. J. K. Childress, Secretary • Orest Gerbaz, Member • Dean Hull, Member • Ford Strong, Member
Dean Suttle, Member • Jean K. Tool, Member • Vernon C. Williams, Member

one that solves the problem and still has the least detrimental impact on the environment.

We appreciate being given the opportunity to comment on the DES and hope some of our comments may prove useful in arriving at the final decision.

Sincerely,

Jack R. Grieb
Director

IIW:lm
cc: T. W. Ten Eyck
Division of Planning
Carl Welsh

RESPONSE TO THE COLORADO DIVISION OF WILDLIFE

The final statement recommends construction at Site I. Utilization of this site would result in less destruction of habitat than would use of Site 2. Based on present population estimates, the treatment capacity of the facility would be increased in 8 - 10 years by installation of additional aeration grids. No additional lagoon construction would be required.

14 August 1974

Mr. John A. Green
Regional Administrator
EPA - Region VIII
Denver, Colorado

Re: Draft Environmental Statement, Palmer Lake
Sanitation District, Project #C 080306

Dear Sir:

Our group of 45 landowners and tax-payers own land (and in nine instances own residences) within approximately one-half mile of the proposed sewage disposal facility (Site 1) which is located within our residential neighborhood. All of our land was purchased in the late 1950's when the property was platted. 33 of our group of 45 are original landowners from the late 1950's. We have our own private sewage disposal (and water wells) in accordance with El Paso County zoning ordinances and will not participate in the use of the proposed sewage disposal facility. The proposed facility will be used by the town of Palmer Lake (center of population approximately 4 miles northwest of Site 1), the town of Monument (center of population approximately 1 mile north of Site 1) and the community of Woodmoor (border approximately 1.7 mile northeast of Site 1). The proposed sewage disposal facility will be located in our residential neighborhood (Pine Hills) which was zoned and platted five acres, in the late 1950's, for single residential use, while there is significant unimproved land in each of the three communities to accommodate their own sewage disposal systems. The proposed facility at Site 1 will create a dyke 18' high, 400' across the Monument Creek flood plain and approximately 850' along the Monument Creek stream bed, in addition to the 300' existing lagoon (see Fig. 1, Att. A). Our group of 45 landowners within approximately one-half mile of the proposed sewage disposal facility, to be located in our residential neighborhood, strongly object to the proposed facility (Site 1) for the following reasons: misuse of land; imposition on our legal rights to land use; environmental hazard; and creating a flood hazard. Judge Finesilver, United States District Court, Denver, at the trial on 17 January 1974, confirmed our residential rights in his published opinion: "The project significantly effects a residential neighborhood".

This letter is to amplify and confirm our position, expressed at the Public Hearings on 16, 22, 29 July, 1974, where we strongly supported EPA in their tentative decision to relocate the expanded facility.

First: We all agree that the communities of Palmer Lake, Monument and Woodmoor have serious sewage problems that must be corrected.

Second: We feel that there are better alternatives than the proposed plan (Site 1) for disposal of the communities' sewage.

Third: The Palmer Lake Sanitation District Environmental Assessment (made by the engineering firm of CH2M) is grossly inaccurate and misleading, especially as pertains to the selection of alternatives to the proposed facility (Site 1), and then the elimination of those alternatives. Due to the Palmer Lake (CH2M) illogical selection of alternatives and the elimination of the same alternatives, the EPA Draft Statement was restricted in evaluating reasonable alternatives.

Fourth: The proposed facility (Site 1) creates a significant increased flood hazard. To provide federal funding to such a project is contrary to Presidential Executive Order 11296, dated August 10, 1966 and contrary to the HUD Flood Disaster Protection Act of 31 December 1973. It is noted that the township of Palmer Lake has been delcared by HUD a "special flood hazards area" and has been declared "eligible for the sale of flood insurance" (as has El Paso County). At the same time, consideration is being given to federal funding of the proposed sewage disposal facility (Site 1) which will sifnificantly increase the flood hazard in our residential area. It is unbelievable that a community can be eligible for federal flood insurance within its township and, at the same time, can be considered for federal funding of a sewage project which will create an additional significant flood hazard in another residential area.

Additional facts which contribute to our statement of 22 July 1974 at the Public Hearing are as follows:

1. - Environmental Impact:

a. Flood Hazard. The Corps of Engineers has not defined the flood parameters for the local area of Site 1. However, Site 1 is arecognized flood hazard and the existing lagoon washed out during the flood of June, 1965. At such time as the necessary flood surveys are accomplished the El Paso County Flood Plain Zone Ordinance, Section XXXII-A, dated 8 February 1973, would prohibit new construction at Site 1. In the meantime, prior to the necessary flood surveys being made, our group considers that even considering construction of the proposed facility at Site 1 by the three communities concerned is extremely irresponsible. However, if further consideration should be given to construction of the proposed project at Site 1, our group recommends that complete flood protection be provided to our private properties adjacent to Site 1. Attachment A provides our Preliminary Flood Analysis of the project and our group's specific recommendations concerning the additional construction required to accomplish the necessary flood proofing.

b. Selection and Evaluation of Alternatives. Our group believes that the selection of alternatives to Site 1 by the Palmer Lake assessment (engineering firm CH2M) was incomplete and the evaluation of the alternatives selected was misleading. Attachment B provides our specific comments and recommendations, which we feel provide further support to the EPA tentative decision to relocate the proposed expanded facility.

2. - The El Paso Board of County Commissioners supported Site 1 in a letter to EPA, dated 2 August 1974. In paragraph 1 the letter states: "The Planning Commission, on May 12, 1971, and the Board of County Commissioners, on May 17, 1971, reviewed the service plan for the Palmer Lake Sanitation District. Both bodies recommended Site 1." This statement is inaccurate. At Attachment D are the official minutes of the Board of County Commissioners, El Paso County, for 17 May 1971. The Board approved the service plan but did not recommend a specific site. The service plan includes 2 alternative sites (Site 1 and a site within the city limits of Palmer Lake. Furthermore, the Order and Decree Creating District (Palmer Lake Sanitation District), in the District Court for the Fourth Judicial District No. 66671, dated 29 October 1971, acknowledged the approved service plan but the Court did not approve a site selection (Att. C).

It is also noted that the December, 1970 service plan provided for a disposal facility to service only the Palmer Lake population of 2,150 in 1990. The service plan did not include a joint facility, for three communities (approximately 12,000 population by 1990), as does the present proposal under consideration. The only mention of a joint expanded facility in the December 1970 service plan was on page 10: ".....The proposed plant will be designed to economically be expanded to accommodate the combined waste of all three areas."

3. - The area land-use policy is included in the Water Quality Management Plan, Pikes Peak Area Council of Governments (PPACG) (August, 1971). This policy does propose a combined sewage disposal at Site 1. However, the detailed Report #2, Monument, Palmer Lake, Woodmoor Basins, states, page 2: "The location of plants, line sizes and service areas as presented in this report are the result of the best available data of existing conditions. As the projected conditions are revised, for various time conditons, so should portions of this report be revised, as part of a scheduled continuing process". Our group feels that our formal opposition for the past three years to the proposed facility located at Site 1 provides adequate substantiation for revision of the site location. Furthermore, the policy proposes the following plan for the Academy Water and Sanitation District (NE of the Air Force Academy, Smith Creek Drainage Basin): "the present sewage lagoon site be phased out and a new treatment plan constructed at the southwest edge of the area at the lowest elevation" (Page 82, Water Quality Management P lan). This has not happened. Instead, the **PPACG** has approved a new Water and Sanitation District in the area (with a separate sewage disposal system - Donala), and there is no effort to comply with the relocation policy of 1971. As our group interprets the situation policy should be used as guidance but not direction. The same interpretation should be applied to the recommended policy concerning a combined sewage disposal facility at Site 1, since none of the Pine Hills landowners (since 1957) were consulted when the policy proposed Site 1 in 1971.

4. - Much was heard at the Public Hearing about the increased mill levy at Palmer Lake.

- Palmer Lake, in their Application for State Grant for Sewage Works, date 6 August, 1974, identified a total mill levy of 94.00. The El Paso County Treasurer's Department maintains a 1973 Tax Levy which includes the following data:

	Mill Levy	
Pine Hills	66.00	(no water, sewage, fire protection)
Colo. Springs	77.99 to 99.55	(depending on services provided)
Monument	93.0	
Palmer Lake	94.0	

Our group concludes that the Palmer Lake mill levy is not exorbitant considering that the community has undertaken major capital investments for the improvement of both their water system and a new sewage system. The fact that the Palmer Lake mill levy is now experiencing overruns of the planned 94.00 mills appears to be a result of poor planning and management on the part of the Palmer Lake Sanitation Board.

5. - One of the primary questions raised by the proposed project and never answered during the Public Hearings pertains to "who is paying for what" for the proposed system at Site 1. If economics and mill levys are to play any part in the decision process concerning site selection it appears that this question must be answered in the public record. I t is noted that the Board of County Commissioners, on 1 August 1974, approved a Palmer Lake Application for State Grant for Sewer Works. Section II of the application includes the following:

A. - Funds to be available for construction:

Source	Amount	Palmer Lake Comments at Meeting
Cash	$ 60,150.00	Palmer Lake Tap Fees
General Oblig. Bonds	485,957.15	Palmer Lake
Revenue Bonds	57,860.00	Palmer Lake (FHA)
Federal Funds	394,275.00	Palmer Lake (EPA)
State Funds	207,222.06	This request
Other Funds	37,860.00	Woodmoor

Apparently, Woodmoor and Palmer Lake are sharing the local cost of the disposal facility @ $57,860 each, with FHA supporting the Palmer Lake contribution. Palmer Lake, of course, is providing significant additional funds for the collection system, interceptor sewers and technical services. Considering the serious financial situation of Palmer Lake, as presented during the Public Hearing, this ratio of 50/50 cost-sharing appears out of balance based upon the fact that Woodmoor will be utilizing approximately 70% of the proposed facility in 1990 and Palmer Lake will be utilizing approximately 18.6% of the facility (p. 29 CH2M - Population).

6. - The Draft EIS, pages 59/60 indicates "sites definitely less desirable for homes if Alt. A is constructed." These sites all are located within approximately 600 ft. of the proposed Site 1. Our group considers that property devaluation as a result of the proposed construction at Site 1 will be much more extensive. For example, my property, located approximately 1500' from Site 1, has been appraised by a local realtor at $53,000 with devaluation up to 20-25% if the proposed Site 1 is constructed. As we stated at the Public Hearing on 22 July 1974, a conservative estimate of our group property within ½ mile of Site 1 could be:

270 acres @ $1,500/acre	$405,000
9 residences @ $30,000 ea.	270,000
	$675,000

Arealistic devaluation of the property could be well over $100,000 if Site 1 is constructed. This, of course, raises the problem of significant liability damage claims against Palmer Lake if they persist in constructing the proposed facility at Site 1 against our group opposition.

7. - Par. 1, p. 71, Draft EIS states: "The Palmer Lake Sanitation District should be allowed to tap into the existing Monument lagoon until construction has been completed at Site 2". Our group believes that such action would be unwarranted and would create serious health hazards. The present lagoon is serving a population of approximately 1,600. The lagoon has been below the State of Colorado standards since 9 February 1972, and has been under an abatement order by the State Waste Water Pollution Control Commission since 31 December 1972. To temporarily hook an additional population of 1,200 into the present unsatisfactory facility would be unreasonable.

Our Group Recommends:

1. - Confirm the Draft EIS tentative recommendation to relocate the proposed expanded facility as a final decision. We believe that our statements at the Public Hearings and in this letter provide strong support for such a final decision.

2. - In the event any further consideration is given to Site 1:

(a) Require a formal flood control analysis of Site 1 and proper flood control construction to protect our adjacent private property. A Corps of Engineers flood analysis also appears to be warranted (See Att. A). Include landscaping requirements and funds in the final design for Site 1.

(b) Evaluate reasonable alternatives specifically to include a joint site on the Beaver Creek Ranch and separate facilities within each of the communities' borders (see Att. B).

(c) Require public financial accountability for all alternatives considered.

(d) Establish realistic financial liability related to Site 1.

(e) Do not approve a temporary hook-up of Palmer Lake to the existing Monument Lagoon.

Our group is available for further consultation.

Charles W. Lenfest
Charles W. Lenfest
Representative for 45 Pine Hills
Landowners opposing Site 1

copies to: El Paso County Commissioners
PPACG

Attachments:

- A. - Preliminary Flood Analysis
- B. - Analysis of Alternatives
- C. - Fourth Judidal District, Order No. 66671, 29 October 1971
- D. - Minutes, Board of County Commissioners, 17 May 1971

ATTACHMENT A

14 August 1974

PRELIMINARY FLOOD ANALYSIS
MONUMENT CREEK CHANNEL - SITE 1

1. At a meeting with Mr. Gilbert, NHPQ, 1000, 12 August 1974, Mr. Gilbert provided the following approximate data:

- No formal flood analysis has been published.
- Planning 20,000 CFS Intermediate Regional Flood.
- Arnold Avenue and bridge will probably wash out.
- Bentonite seal in the two proposed lagoons.
- No Bentonite seal for existing lagoon.
- East and west bank grades approximately 1/1.5.
- Heavy rip-rap (300 lb.) protection for east bank of channel.
- No protection for west bank of channel.
- West bank of channel graded opposite new lagoons.
- Natural stream bank opposite existing lagoon.
- No protection of south bank of existing lagoon.
- No protection of chlorination contact chamber.
- New dyke berm - 6846' above sea level.
- Existing dyke berm - 6833' above sea level.
- Chlorine chamber berm - 6827' above sea level.
- Monument Creek bed as indicated on Fig. 1 (attached).
- No entrance transition construction.
- No exit transition construction.
- Flow will dissipate to normal flood stage in the Monument Creek channel at Section B (Fig. 1 attached).
- Design Flow:

Discharge Sect. B, Fig. 1		Below Entrance Sect. A, Fig. 1
15'	depth	13'
14'/sec.	velocity	12'/sec.
18.19'/sec.	critical velocity	17.17'/sec.
60'	approx. width of channel bottom	100'

Erosion can be expected on the west bank and from tail water. Extent of erosion has not been calculated.

Mr. Gilbert advised that there should be no problem with the tail-water inundating the existing lagoon or the chlorine chamber. He said he would provide our group with a set of engineering specifications and an analysis of tail-water flow at Sec. B, Fig. 1 and below the existing lagoon.

ATTACHMENT A

3. Our Group Comments:

a. - Until a Corps of Engineers study of the area defines the flood parameters, we feel that 20,000 CFS Intermediate Regional Flood is a reasonable planning factor. It is noted that the Corps has defined 31,000 CFS, IRF for the Monument Creek above the Templeton Gap Outlet in Colorado Springs. (Document - Flood Plain Information, Monument Creek, Colorado Springs, Colorado, Dept. of Army, Albuquerque District Corps of Engineers - May, 1971). Also, the Corps has recorded extremely heavy rainfall during the flood of June, 1965 on the upper reaches of Monument Creek (Fig. 2 attached). The creek drainage basin includes approximately 40 sq. mi. above Site 1. The existing lagoon washed out during the flood of 1965. Also, the Corps recorded: "Estimate of Damage (in $1,000) - includes damage to the Palmer Lake Water Supply facilities". (Document - Flood of June, 1965, Colorado, Kansas and New Mexico, U. S. Army District, Albuquerque, New Mexico, April, 1966, Table 5). Considering the above factors, 20,000 CFS Intermediate Regional Flood appears to be a reasonable planning factor

b. - We have made a rough profile sketch of the flood conditions as we now understand the engineering specifications (Fig. 1 attached). We do not understand how the transition flow can be accomplished at Sect. B without inundating the existing lagoon and chlorine chamber

c. - The design specifications provided by Mr. Gilbert, NWPQ, indicate a wall of water more than 60 ft. wide, 15 ft. high, with a velocity of 14'/sec. (approx. 9.5 mph) will be discharged from the critical sections of the floodway (Sect. B, Fig. 1, attached). This is no trickling stream. 20,000 CFS is equivalent to approximately 625 tons per second. An order of magnitude of the momentum produced by such a flood could be to compare it with the momentum of approximately 31 freight trains abreast travelling at the same speed of 14'/sec. (approx. 9.5 mph) (very large trains with each car 100 tons and 70' long).

d. - It appears to our group that there will be very great flood erosion of our properties above the entrance and along the west bank. Discharge into the normal Monument stream bed could completely tear up private property west, east and south for a great distance unless a catch basin is designed to properly dissipate the floodway discharge to normal flood stages for Monument Creek.

Construction of the proposed project could possibly double the depth of flooding of private property upstream of the floodway channel. In addition, it appears that such flooding would persist over the long period of the storm and run-off. On the other hand, under present conditons, the deep flooding might occur for only a short period of time while the flood crests, **washes** out Arnold Avenue and the bridge and then the flood immediately resides to normal flood depths. Extrapolating the Corps of Engineers' data for overflow of the Monument Creek (Table 5, May, 1971 Report) a flood today might create an overflow of 3½ ft. depth, 5 ft./sec. overbank velocity, across the approximate 600' overflow basin. On the other hand, the proposed project would create a flood crest above 6842' and a head of at least 6 ft., 3'/sec. overbank velocity. In other words, the proposed project would create a huge lake upstream during flood conditions.

e. - Our Group believes that under the considerations of "equal degree of encroachment", and because of the recognized potential for flood erosion, significant additional protection must be provided to the private property upstream, west bank and downstream of the proposed floodway channel prior to further consideration of Site 1.

f. - It is noted that the proposed two new lagoons will have a Bentonite seal. The existing lagoon was not provided with a Bentonite seal during construction and has a history of seepage. The total waste load projection is designed to transit the existing lagoon (See Fig. 1 attached). This waste flow is projected as 576,000 gal./day by 1980 and 1,428,000 gal. per day by 1990 (Table 3, p. 45, CH2M assessment). Our group feels that this heavy flow will contribute to a serious increase in seepage at the existing lagoon unless it is provided with a Bentonite seal.

4. It is apparent to our Group that before any further consideration of Site 1 is even contemplated the following requirements are mandatory:

(a) A formal engineering flood analysis be published on the proposed Site 1.

(b) The design specifications should provide a Bentonite seal for the existing lagoon as part of the initial construction.

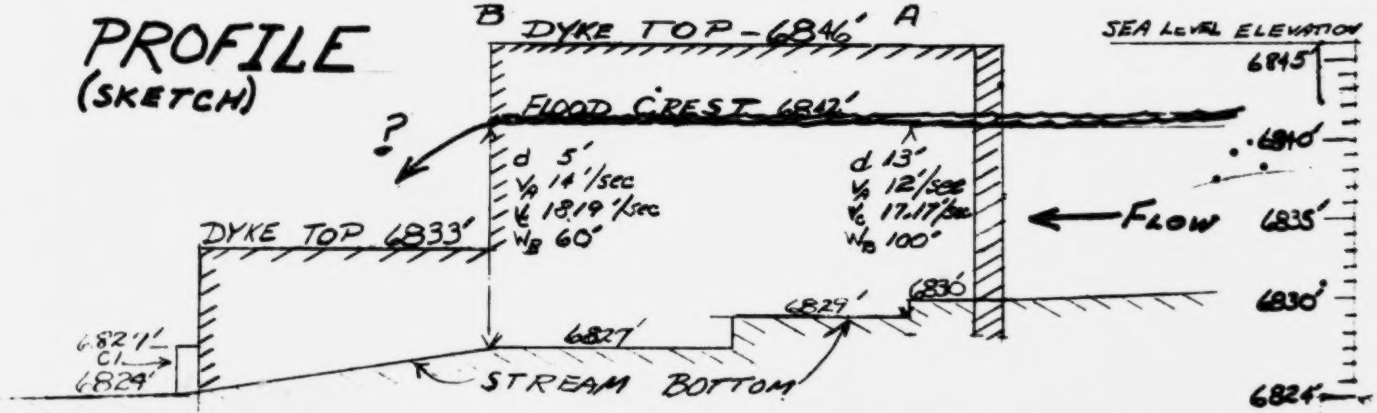
(c) Construction of an entrance transition to the flood channel should be provided in the design specifications.

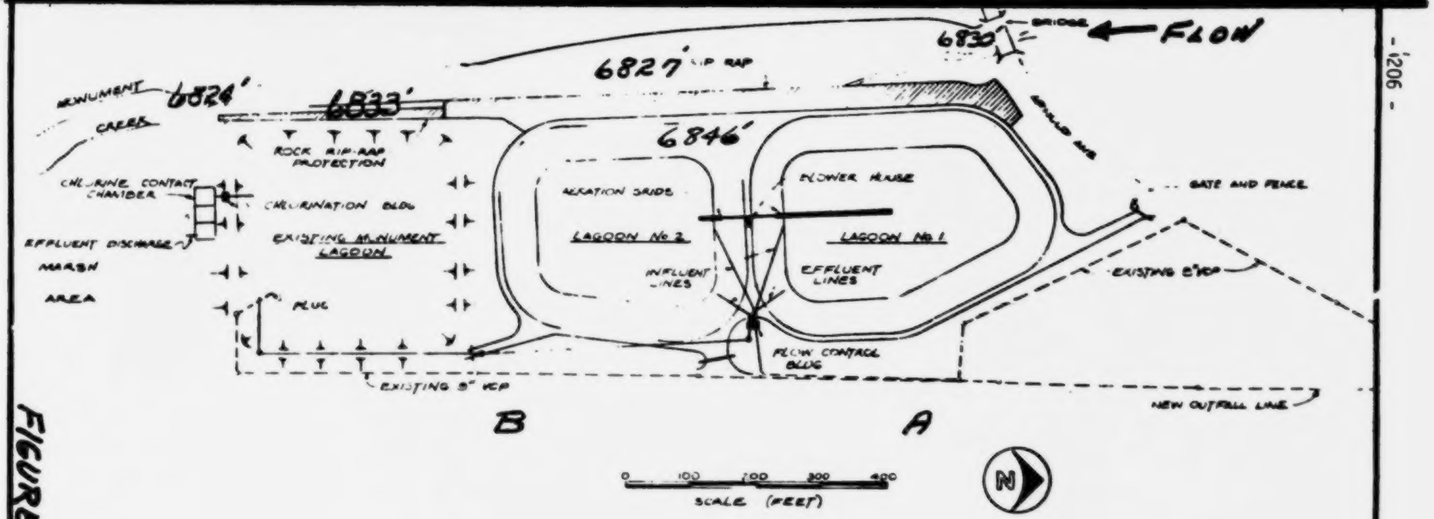
(d) Protection of the west bank of the total flood channel be provided consistent with protection of the east bank.

(e) Protection of the existing lagoon and proposed chlorination contact chamber should be provided consistent with protection of the proposed new lagoons.

(f) Construction of an exit transition (tail-water, catch basin) should be provided to disperse the flow so as to negate significant flood damage to downstream property.

(g) Due to the magnitude of the proposed project a Corps of Engineer analysis of the flood plain appears to be warranted prior to any further consideration of construction at Site 1 with Federal monies.


PROFILE
(SKETCH)
B
DYKE TOP - 6846'
A
SEA LEVEL ELEVATION
6845
FLOOD CREST 6842'
?
6840'
d 5'
V_A 14'/sec
V_C 18.19'/sec
W_B 60'
d 13'
V_A 12'/sec
V_C 17.17'/sec
W_B 100'
FLOW
6835'
DYKE TOP 6833'
6830'
6829'
6830'
6827'
6827'
C.L.
6824'
STREAM BOTTOM
6824'


6830'
BRIDGE
FLOW
6827' RIP RAP
MONUMENT
6824'
CREEK
6833'
6846'
ROCK RIP-RAP PROTECTION
CHLORINE CONTACT CHAMBER
CHLORINATION BLDG
EFFLUENT DISCHARGE
MARSH
AREA
EXISTING MONUMENT LAGOON
PLUG
EXISTING 5" VCP
AERATION GRIDS
LAGOON No 2
INFLUENT LINES
BLOWER HOUSE
LAGOON No 1
EFFLUENT LINES
FLOW CONTROL BLDG
GATE AND FENCE
EXISTING 8" VCP
NEW OUTFALL LINE
B
A
0
100
200
300
400
SCALE (FEET)
N

PROPOSED TREATMENT FACILITY
SITE PLAN -(FIG 11, P67, CH2M ASSESMENT)

FIGURE 1

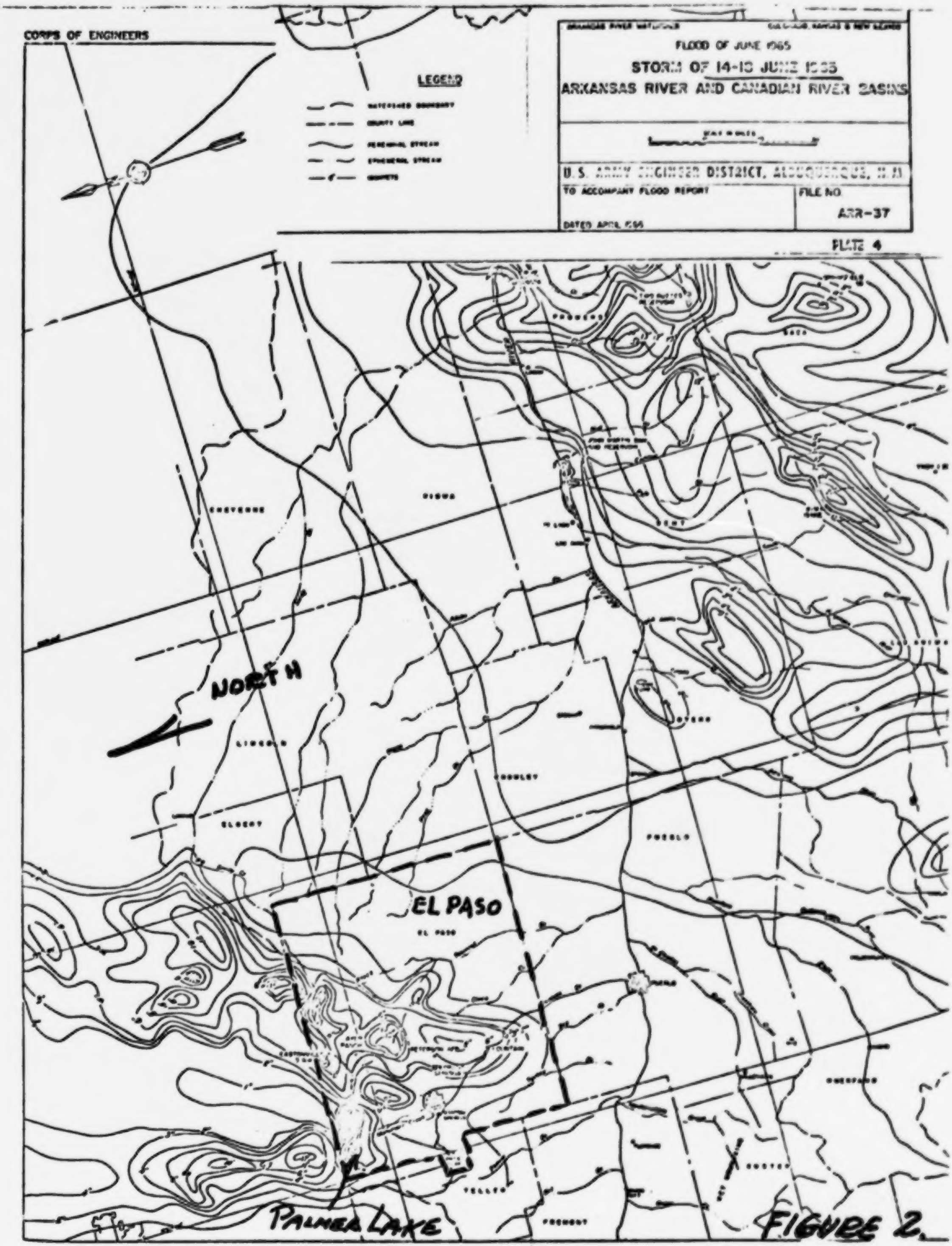

CORPS OF ENGINEERS
LEGEND
WATERSHED BOUNDARY
COUNTY LINE
PERENNIAL STREAM
EPHEMERAL STREAM
ISOHYETS
FLOOD OF JUNE 1965
STORM OF 14-18 JUNE 1965
ARKANSAS RIVER AND CANADIAN RIVER BASINS
U.S. ARMY ENGINEER DISTRICT, ALBUQUERQUE, N.M.
TO ACCOMPANY FLOOD REPORT
FILE NO.
ARR-37
DATED APRIL 1966
PLATE 4
NORTH
CHEYENNE
KIOWA
LINCOLN
ELBERT
CROWLEY
PUEBLO
EL PASO
EL PASO
TELLER
FREMONT
OTERO
PALMER LAKE

FIGURE 2.

ATTACHMENT B

14 August 1974

ANALYSIS OF ALTERNATIVES

(Ref. Pages 57-61 CH2M Assessment)

Our Group feels that the pros and cons concerning both selection and evaluation of alternatives are grossly misleading. The use of inaccurate statements in an apparent attempt to influence the EPA decision is to be condemned. We feel that our Group comments more accurately portray the actual situation and provide support to EPA's tentative recommendation to relocate the proposed expanded facility.

"Alternative C (Site 3) is unsuitable because of cost and its tendency to induce growth......." (p. 57, CH2M).

Group Comment: Perhaps an alternative can be located on the open ranch land between Site 2 and Site 3 which would be satisfactory and less costly than Site 3. For instance, during the Public Hearings it was noted that Mr. Bernard L. Trott, attorney for Mr. Barry Hill, owner of the Beaver Creek Ranch (approximately 2,000 acres) was authorized to make the statement that Mr. Barry Hill might donate land on the Beaver Creek Ranch for a sewage disposal facility. Our group recommends that this alternative should be investigated.

"Alternative D (separate facilities) was eliminated due to high cost and high impact on the natural environment" (p. 58 CH2M).

Group Comment: We question the high cost, compared to Site 1, when Site 1 is properly flood proofed (see Att. A). In addition, we note that "Site 5 is unacceptable because of its unstable soils and changing pattern of erosion" (p. 16, CH2M). It appears to us that a reasonable selection of a site for a separate disposal facility could find some location on the extensive open land within the Woodmoor development that would be acceptable from an erosion standpoint. Also, separate facilities within each of the three communities boundaries would avoid the present arguments over Site 1 located in our residential neighborhood and avoid possible future legal entanglements concerning liability. We note the reasonable costs for construction of a "tertiary" system (Donala Water and Sanitation District, Exhibit H, Public Hearings). Finally, "tertiary" systems would have much less impact on the natural environment than the proposed system of large lagoons constructed at Site 1 in a flood hazard area. Our Group recommends that separate facilities be evaluated in detail.

Alternative A (Site 1), Advantages: (p. 58 CH2M)

1. "Site 1 is a dumping ground".

Group Comment: Dumping is prohibited by Colorado law and Palmer Lake (owner of Site 1 by condemnation proceedings) was responsible

ATTACHMENT B

to eliminate dumping on their property in our residential neighborhood. Palmer Lake has recently corrected this situation.

2. "Site 1 closer to Woodmoor ...... easier to pump effluent to the golf course".

Group Comment: It would be much easier and less costly to pump effluent to the golf course if the Woodmoor sewage disposal facility (70-80% of the Site 1 proposed facility) were constructed on Woodmoor property adjacent to the golf course rather than approximately two miles downstream in our residential area. There is adequate vacant land available within the Woodmoor development to accommodate Woodmoor sewage disposal.

3. "The impact of the existing lagoon on the natural environment already exists. It would be preferrable to continue ....".

Group Comment: The existing lagoon was designed for 205 people (see Exhibit F, Public Hearing). The existing lagoon is presently serving approximately 1600 people (p. 29, CH2M assessment). This present expansion is under court litigation. Site selection for the proposed system of lagoons, designed for approximately 12,000 people, should not be based upon what happened in 1963 for 205 people. Furthermore, the basic issue concerns the environmental impact on the Pine Hills residential neighborhood (Ref. decision U. S. District Court).

4. "The artificially created marsh below the existing lagoon has proven to be a beneficial habitat which should not be disturbed."

Group Comment: This assessment is not shared by the Health Department of Colorado. The Colorado Department of Health, on 21 May 1971, stated: "Marsh created by effluent should be drained and adequate drainage provided for effluent to prevent mosquito harborage and breedings. This should be done this summer". (Fig. 1 attached). Our Group concurs with the Colorado Department of Health.

5. "Good road access exists to the site".

Group Comment: Agree.

6. "Urban residential densities will be confined more closely to areas designated for development in the land use plan .

Group Comment: Agree. However, Site 1 will provide a possible sewage potential and, therefore, also encourage urban development for approximately 1,000 acres of Pine Hills not now planned for urban development.

7. "Alternative A (Site 1) is an economical interim solution".

Attachment B
Analysis of Alternatives
14 August 1974
Page 3.

Group Comment: Why not get a final solution now? Also, the proposed project at Site 1 (approximately $400,000), when provided with sound flood control as described in Attachment A, does not appear to be economical.

An additional advantage for Site 1 was added in the Draft Impact Statement (page 36):

8. "The District owns sufficient land.......".

Group Comment: The district does not own sufficient land for expansion. For example: the Palmer Lake (CH2M assessment, pps. 60, 65) questions the capability to expand beyond approximately 12,000 people by 1990. On the other hand, the PPACG estimates a possible 18,310 people by 1990 (footnote 4, page 29, CH2M assessment).

Alternative A (Site 1) Disadvantages (p. 59, CH2M):

Group Comment: Concur.

Alternative B (Site 2) Advantages (p. 60, CH2M):

Group Comment: Concur.

Alternative B (Site 2) Disadvantages (p. 60, CH2M):

1. "New access road will be required".

Group Comment: Concur. However, we question the cost estimate of $36,000 provided by Mr. Gary Wyndoff (WHFQ) at the Public Hearing on 16 July 1974. The engineers of the El Paso County Road Department have advised us informally that their gross planning factors are less than $10,000 per mile for an all-weather gravel road constructed in this general area to County acceptance specifications. The PPACG staff estimates that approximately 3,000' of road construction will be required.

2. "Additional costs...... for removal of old lagoon and restoration.....".

Group Comment: Mr. Norman Bodinger, Pine Hills, Inc., has indicated that he will restore the existing site at his own expense and dedicate 10 acres to public use as a park (p. 72, Draft EIS).

3. "The facility (Site 2) will induce residential development".

Group Comment: There is no residential development in the vicinity of Site 2 at present. There is residential development near Site 1 (Pine Hills). We feel that there will be little further residential development near whichever site is selected after the proposed facility is constructed. Furthermore, residential development could be controlled by zoning actions of El Paso County Commissioners.

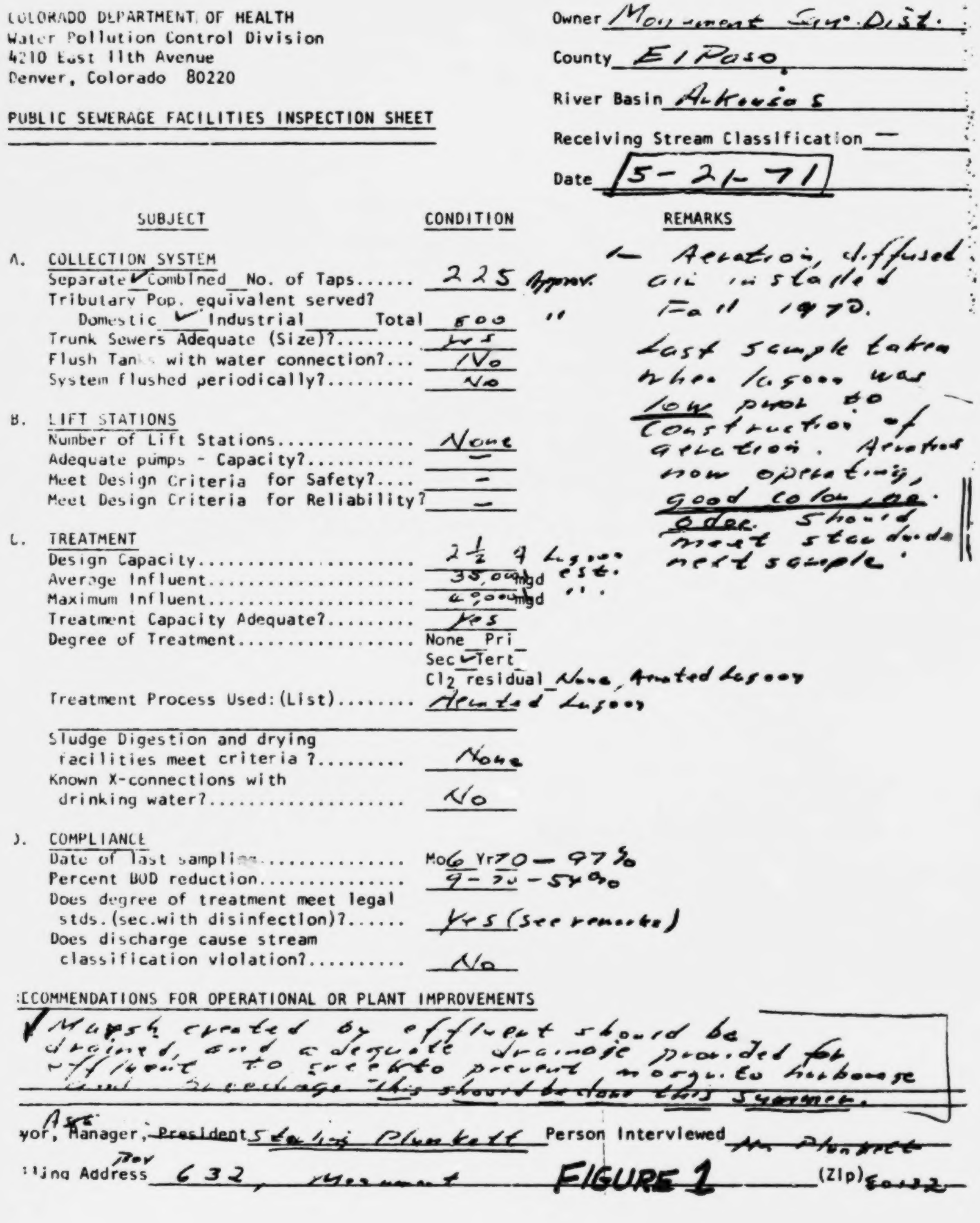
4, 5. Group Comment: Concur.

6. "Overcoming financial difficulties of a joint enterprise would further delay ....".

Group Comment: Concur. However, the difficulties of a joint enterprise are inherent in the PPACG policy establishing a requirement for the joint enterprise. If these difficulties are unsurmountable the policy should be adjusted to allow separate facilities.

7, 8. "Delay and increased costs".

Group Comment: Generally concur. However, the delay experienced to date on Site 1 and the increased costs to properly floodproof Site 1 (see Att. A) provide an indication that Site 2 could possibly be approved and constructed at an earlier date and at less final cost than continuing to attempt to overcome our Group opposition to Site 1.



COLORADO DEPARTMENT OF HEALTH
Water Pollution Control Division
4210 East 11th Avenue
Denver, Colorado 80220

PUBLIC SEWERAGE FACILITIES INSPECTION SHEET

Owner Monument San. Dist.
County El Paso
River Basin Arkansas
Receiving Stream Classification —
Date 5-21-71

SUBJECT	CONDITION	REMARKS
A. COLLECTION SYSTEM		← Aeration, diffused air installed Fall 1970.
Separate ✓ Combined ___ No. of Taps	225 Approx.	
Tributary Pop. equivalent served? Domestic ✓ Industrial ___ Total	800 "	
Trunk Sewers Adequate (Size)?	Yes	Last sample taken when lagoon was low prior to construction of aeration. Aerators now operating, good color, no odor. Should meet standards next sample.
Flush Tanks with water connection?	No	
System flushed periodically?	No	
B. LIFT STATIONS		
Number of Lift Stations	None	
Adequate pumps - Capacity?	—	
Meet Design Criteria for Safety?	—	
Meet Design Criteria for Reliability?	—	
C. TREATMENT		
Design Capacity	2 ½ A Lagoon	
Average Influent	35,000 mgd est.	
Maximum Influent	40,000 mgd "	
Treatment Capacity Adequate?	Yes	
Degree of Treatment	None ___ Pri ___ Sec ✓ Tert ___ Cl$_2$ residual None, Aerated Lagoon	
Treatment Process Used: (List)	Aerated Lagoon	
Sludge Digestion and drying facilities meet criteria?	None	
Known X-connections with drinking water?	No	
D. COMPLIANCE		
Date of last sampling	Mo 6 Yr 70 — 97%	
Percent BOD reduction	9-70 — 54%	
Does degree of treatment meet legal stds. (sec. with disinfection)?	Yes (see remarks)	
Does discharge cause stream classification violation?	No	

ECOMMENDATIONS FOR OPERATIONAL OR PLANT IMPROVEMENTS

✓ Marsh created by effluent should be drained, and adequate drainage provided for effluent to creek to prevent mosquito harborage and breeding. this should be done this summer.

yor, Ass't Manager, ~~President~~ Sterling Plunkett Person Interviewed M. Plunkett
ling Address Box 632, Monument (Zip) 80132

FIGURE 1

29 Oct 71

STATE OF COLORADO)
) ss.
COUNTY OF EL PASO)

IN THE DISTRICT COURT FOR
THE FOURTH JUDICIAL DISTRICT

No. 66671

IN RE THE ORGANIZATION OF)
PALMER LAKE SANITATION)
DISTRICT, EL PASO COUNTY,)
COLORADO)

ORDER AND DECREE CREATING DISTRICT

This matter coming on to be heard in open Court, and it appearing that the election, held on the 19th day of October, 1971, at which there was submitted the matter of the organization of Palmer Lake Sanitation District, El Paso County, Colorado, and the election of Directors for such District, was duly held at the time and place and by the Judges of Election specified in the Order of Court entered on the 20th day of September, 1971;

AND IT FURTHER, appearing that the required Notice of Election was duly published in compliance with the aforementioned Order and in accordance with the requirements of law; that all of said ballots were cast at said election by electors of the District who were qualified to vote at general elections in this State and who either had been a resident of the District for not less than thirty-two days, or who or whose spouse own taxable real or personal property within the District, whether said person resides within the District or not. The following ballots were cast on the question of organization of the District:

	Votes Cast
FOR the Organization of Palmer Lake Sanitation District	210
AGAINST the Organization of Palmer Lake Sanitation District	52

ATTACHMENT C

That the following qualified persons were duly elected as directors of the District for the indicated terms:

NAME	TERM
Kenneth J. McCall	until the FIRST Biennial Election
Alice B. Foote	until the SECOND Biennial Election
Joseph R. McCammon	until the SECOND Biennial Election
Gary E. Chase	until the THIRD Biennial Election
George E. Fuller	until the THIRD Biennial Election

AND IT STILL FURTHER APPEARING that all of the provisions of law, and more particularly all of the requirements of Colorado Revised Statutes 1963, Chapter 89, Article 5, as amended, and Chapter 89, Article 18 (1965 Supplement), as amended, have been complied with, met and performed, in the organization of said District.

And the Court being fully advised in the premises, hereby ORDER AND DECREES That:

Said District has been duly and regularly organized and shall be known as "Palmer Lake Sanitation District", in El Paso County, Colorado.

The District is located in El Paso County, Colorado, and is described as follows:

A parcel of land being a portion of Sections 5, 8, 9, and 10, Township 11 South, Range 67 west of the Sixth Principal Meridian, El Paso County, Colorado, and being more particularly described as follows:

The West Half of Section 5 (W½ Sec. 5);

The Northwest Quarter of the Northeast Quarter of Section 5 (NW¼NE¼ Sec. 5);

That portion of the Northeast Quarter of the Northeast Quarter of Section 5 (NE¼NE¼ Sec. 5) lying Northerly of the Northerly right-of-way line of the Denver and Rio Grande Western Railroad;

That portion of the Southwest Quarter of the Northeast Quarter (SW¼NE¼) and the Northwest Quarter of the Southeast Quarter of Section 5 (NW¼SE¼ Sec. 5) lying westerly of the Westerly right-of-way line of the Denver and Rio Grande Western Railroad;

The Southwest Quarter of the Southeast Quarter of Section 5 (SW¼SE¼ Sec. 5);

That portion of the Southeast Quarter of the Southeast Quarter of Section 5 (SE¼SE¼ Sec. 5) lying Southerly of the Northerly right-of-way line of Colorado State Highway No. 105;

The North Half of Section 8 (N½ Sec. 8);

The Northeast Quarter of the Southeast Quarter of Section 8 (NE¼SE¼ Sec. 8);

That portion of the North Half of the Northwest Quarter of Section 9 (N½NW¼ Sec. 9) lying Southerly of the Northerly right-of-way line of Colorado State Highway No. 105;

That portion of the Southeast Quarter of the Northwest Quarter of Section 9 (SE¼NW¼ Sec. 9) lying within the rights-of-way lines of Colorado State Highway No. 105;

That portion of the Southwest Quarter of the Northeast Quarter of Section 9 (SW¼NE¼ Sec. 9) lying Southerly of the Northerly right-of-way line of Colorado State Highway No. 105;

The Southeast Quarter of the Southwest Quarter of Section 9 (SE¼SW¼ Sec. 9);

The South Half of the Southeast Quarter of Section 9 (S½SE¼ Sec. 9);

That portion of the North Half of the Southeast Quarter of Section 9 (N½SE¼ Sec. 9) lying Southerly of the Northerly right-of-way line of Colorado State Highway No. 105;

The Southwest Quarter of the Southwest Quarter of Section 10 (SW¼SW¼ Sec. 10);

The Southeast Quarter of the Southwest Quarter of Section 10 (SE¼SW¼ Sec. 10) lying South and West of the South right-of-way line of the Denver and Rio Grande Western Railroad;

The Southwest Quarter of the Southeast Quarter of Section 10 SW¼SE¼ Sec. 10) lying South of the South right-of-way line of the Denver and Rio Grande Western Railroad; and,

The Northeast Quarter of the Northwest Quarter of Section 15 (NE¼NW¼ Sec. 15);

The West Half of the Northwest Quarter of the Northeast Quarter of Section 15 (W½NW¼NE¼ Sec. 15);

That portion of the Northeast Quarter of the Southwest Quarter of Section 10 (NE¼SW¼ Sec. 10) lying west of the Westerly right-of-way line of the Denver and Rio Grande Western Railroad;

The Northeast Quarter of the Southeast Quarter and the Southeast Quarter of the Southeast Quarter, all in Section 8, Township 11 South, Range 67 West of the 6th P. M.; and,

The Northwest Quarter of the Southwest Quarter; that part of the Southwest Quarter of the Southwest Quarter lying North and West of the County School Bus Road known as "Red Rock Ranch Drive;" that part of the Northeast Quarter of the Southwest Quarter lying North and West of said County School Bus Road known as "Red Rock Ranch Drive" (subject to access road easement 20 foot wide from said County Road to the Frank Klotz property); that part of the Southeast Quarter of the Northwest Quarter lying South and West of the Southwesterly line of the County Road, formerly U. S. Highway and lying North and West of the County School Bus Road known as "Red Rock Ranch Drive," except those portions thereof described in Warranty Deed to Raymond F. Purcell recorded in Book 1884 at Page 195 under Reception No. 206454 and in Book 1363 at Page 267 under Reception No. 887141, and except that portion of the Southeast Quarter of said Northwest Quarter lying Northwesterly of the tract described in said deed recorded in Book 1363 at Page 267; and, including that portion of the Southeast Quarter of the Northwest Quarter, described as follows: commencing at the Northwest corner of said Southeast Quarter of the Northwest Quarter, thence Easterly along the Northerly line of the said Southeast Quarter of the Northwest Quarter 441.57 feet to a point of intersection with the Southwesterly right of way line of a county road (formerly U. S. Highway No. 85-87); thence angle right 41° 14' along said right of way line 202.98 feet to the point of beginning of the tract herein described; thence continuing on the previous course 215 feet; thence angle right 105° 40' 700 feet; thence angle right 162° 07' 40" 672.37 feet to the point of beginning; all in Section 9, Township 11 South, Range 67 West of the 6th P. M.

NOV 1 1971

Said District shall be a governmental subdivision of the State of Colorado, and a body corporate with all the powers of a public or quasi-municipal corporation; that the facilities, services and financial arrangements of the District shall conform as far a practicable to the approved Service Plan and Resolution of Approval, of the Board of County Commissioners of El Paso County, Colorado. The approved Service Plan and Resolution of Approval required by Chapter 89, Article 18, Colorado Revised Statutes 1963 (1965 Supplement), previously filed in the within action shall be and the same are hereby incorporated by reference in and appended to this Order.

The Board of Directors shall take such steps and proceedings as the needs of the District require; and that within thirty (30) days after the date hereof, the Clerk of this Court shall transmit to the County Clerk and Recorder of El Paso County, Colorado, and to the County Assessor of said County, true and correct copies of this Order and Decree, with the Resolution of Approval appended hereto, for filing in their offices. Notice of the completion of the organization of the District shall be filed in duplicate and recorded with the County Clerk and Recorder of El Paso County, and a certified duplicate copy of said Notice filed with the Division of Local Government of the State of Colorado.

Done this 29 day of October, 1971.

BY THE COURT:

WILLIAM M. CALVERT

Judge

County Commissioner 17 May 71

STATE OF COLORADO)
) ss.
COUNTY OF EL PASO)

The Board of County Commissioners of the County of El Paso, State of Colorado, met in regular session at the Commissioners' Conference Room, County Office Building, 27 East Vermijo, in Colorado Springs, Colorado, being the regular meeting place of said Board, at the hour of 11:00 o'clock a.m., on Monday, the 17th day of May, 1971.

There were present:

Chairman:	James R. Ross
Commissioners:	John C. Mitchell, Jr. Stan Johnson
County Clerk and Recorder:	Harriet Beals, by Verna Feilner, Deputy Clerk
County Attorney:	James E. Tarter
Counsel for Petitioners and Proponents:	Ron E. Ewing Agee and Fann 512 South Eighth Street Colorado Springs, Colorado 80905

Thereupon, the following proceedings, among others, were had and taken:

A Hearing on the proposed Palmer Lake Sanitation District was held by the Board of County Commissioners, pursuant to the provisions of Section 89, Article 18, of the Colorado Revised Statutes 1963 (1965 Supplement) as amended, and in accordance with a Resolution adopted and approved by the said Board on the 22nd day of April, 1971.

ATTACHMENT D

Thereupon, Commissioner James R. Ross introduced and moved the adoption of the following Resolution:

RESOLUTION

WHEREAS. pursuant to the provisions of the Special District Control Act, Chapter 89, Article 18, Colorado Revised Statutes 1963 (1965 Supplement) as amended, the Board of County Commissioners of the County of El Paso, State of Colorado, held a public hearing on the Service Plan of the proposed Palmer Lake Sanitation District on the 17th day of May, 1971; and,

WHEREAS, Notice of the Hearing was duly published in the Colorado Springs Sun, a newspaper of general circulation within said County, on April 26, 1971, May 3, 1971, and May 10, 1971, as required by law and a copy of said Notice was forwarded to the Petitioners and to the Planning Commission of said County and to the governing body of each municipality and special district which has levied an ad valorem tax within the next preceding tax year and which has boundaries within a radius of three miles of the proposed District; and,

WHEREAS, the said Board has considered the Service Plan and all other testimony and evidence presented at the Hearing; and,

WHEREAS, it appears that the Service Plan should be approved without condition or modification:

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF EL PASO, STATE OF COLORADO:

1. That the Board of County Commissioners of the County of El Paso, State of Colorado, does hereby determine that all of the requirements of Chapter 89, Article 18, of the Colorado Revised Statutes 1963 (1965 Supplement) as amended, relating to the filing of a Service Plan for the proposed Palmer Lake Sanitation District have been fulfilled and that Notice of Hearing was given in the time and manner required by law, including Notice by Certified Mail from the Clerk and Recorder of said County of El Paso, to the Town of Monument, Town of Palmer Lake, Forest View Water District, and Woodmoor Water and Sanitation District, all being within a radius of three (3) miles from the proposed Palmer Lake Sanitation District.

How about
Pine Hills
Ave

2. That the Service Plan of the proposed Palmer Lake Sanitation District is hereby approved without condition or modification.

3. That no party appeared in objection to the approval of the proposed Palmer Lake Sanitation District.

4. That a certified copy of this Resolution be filed in the records of the County of El Paso, State of Colorado, and submitted to the Petitioners and Proponents for the purpose of filing in the District Court in and for the said County of El Paso, State of Colorado.

ADOPTED AND APPROVED this 17th day of May, 1971.

SEAL

/s/ James R. Ross
Chairman
Board of County Commissioners
County of El Paso
State of Colorado

ATTEST:

/s/ Harriet Beals
County Clerk and Recorder
County of El Paso
State of Colorado

CERTIFICATE

I, Harriet Beals, County Clerk and Recorder of the County of El Paso, State of Colorado, do hereby certify that the above and foregoing is a true, correct, and complete copy of a Resolution adopted by the Board of County Commissioners of the County of El Paso, State of Colorado, at a regular meeting held on the 17th day of May, 1971.

Witness my hand and the official seal of said County of El Paso this 17th day of May, 1971.

S E A L

Harriet Beals
County Clerk and Recorder
County of El Paso
State of Colorado

Commissioner John C. Mitchell, Jr., seconded the motion for the passage and adoption of said Resolution.

The question being upon the passage and adoption of said Resolution, the roll was called with the following results:

Those voting AYE:

Commissioners: James R. Ross
John C. Mitchell, Jr.

Those voting NAY: None

Those abstaining: Stan Johnson ✓

The presiding officer of the Board thereupon declared that a majority of all of the Commissioners elected having voted in favor thereof the motion was carried and the said Resolution was duly passed and adopted.

After consideration of other matters to come before the said Board, on motion duly made and seconded, the meeting was adjourned.

S E A L

/s/ James R. Ross
Chairman
Board of County Commissioners
County of El Paso
State of Colorado

ATTEST:

/s/ Harriet Beals
County Clerk and Recorder
County of El Paso
State of Colorado

LAND OWNERS IN THE IMMEDIATE VICINITY OF MONUMENT, COLORADO SEWAGE LAGOON OPPOSING CONSOLIDATED SEWAGE DISPOSAL FACILITIES AT THE PRESENT MONUMENT SEWAGE LAGOON:

I, ______________________________, legal owner of approximately __________ acres, El Paso County, Colorado Tax Schedule #______________, agree and support the Citizens' Opposition to the construction of a sewage disposal facility in the immediate vicinity of my property (outlined in EPA Project #C 080306, subject Palmer Lake Sanitation District). This does not constitute opposition per se to the Palmer Lake Sanitation District or a disposal facility at another location. I designate Charles W. Lenfest to represent me in this opposition. This statement does not obligate me to the committment of funds.

Signed ______________________________

Date ______________________________

Address:
____

JUN 9 1970 1:32 224 - BOOK 2347 PAGE 845

Filed for record the JUN 9 1970 day of .... A. D. 19...., at 1:32 o'clock P. M.

Reception No. 734581

HARRIET BEALS ...... RECORDER

This Deed, Made this 8th day of December in the year of our Lord one thousand nine hundred and fifty-seven between JOHN F. HUGHES, of the County of Clark, State of Nevada, and NORMAN B. BODINGER, of the County of El Paso and State of Colorado, of the first part, and CHARLES W. LENFEST and LORIE B. LENFEST, of the County of Ada and State of ~~Colorado~~ Idaho, of the second part;

Witnesseth, That the said parties of the first part, for and in consideration of the sum of Ten and no/100 ($10.00) Dollars and other good and valuable considera~~DOLLARS~~tion, to the said parties of the first part in hand paid by the said parties of the second part, the receipt whereof is hereby confessed and acknowledged, have granted, bargained, sold and conveyed, and by these presents do grant, bargain, sell, convey and confirm unto the said parties of the second part, not in tenancy in common but in joint tenancy, the survivor of them, their assigns and the heirs and assigns of such survivor forever, all the following described lot or parcel of land, situate, lying and being in the County of El Paso and State of Colorado, to-wit:

Lot 6, Block 3, in Pine Hills Addition No. 4, according to the amended plat thereof.

Reserving to the grantors, their heirs and assigns, one-half of all oil, gas and minerals and all surface and ground water rights except well water needed for domestic and irrigation use on the described premises only and subject to United States Patent Reservations, easements shown on the recorded plat and restrictive covenants of record.

S.F. 6.00

STATE DOCUMENTARY FEE
JUN 9 1970
$ .60

Together with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever of the said parties of the first part, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

To Have and to Hold the said premises above bargained and described, with the appurtenances, unto the said parties of the second part, the survivor of them, their assigns and the heirs and assigns of such survivor forever. And the said parties of the first part, for themselves heirs, executors, and administrators, do covenant, grant, bargain and agree to and with the said parties of the second part, the survivor of them, their assigns and the heirs and assigns of such survivor, that at the time of the ensealing and delivery of these presents, they are well seized of the premises above conveyed, as of good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and have good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and incumbrances of whatever kind or nature soever, except taxes for 1958 and subsequent years.

and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, the survivor of them, their assigns and the heirs and assigns of such survivor, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said parties of the first part shall and will WARRANT AND FOREVER DEFEND.

In Witness Whereof, The said parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in the Presence of

Norman B Bodinger (Seal)
John F Hughes (Seal)
(Seal)

STATE OF COLORADO,
County of EL PASO } ss.

The foregoing instrument was acknowledged before me this 8 day of December, 19 57, by* JOHN F. HUGHES and NORMAN B. BODINGER

Witness my hand and official seal.
My commission expires

JOHN F. BENNETT, NOTARY PUBLIC
EL PASO COUNTY, COLORADO
MY COMMISSION EXPIRES JAN. 5th, 1959

John F. Bennett
Notary Public

*If acting in official or representative capacity, insert name and also office or capacity and for whom acting.

EXHIBIT B

WARRANTY DEED TO JOINT TENANTS—Out West Printing and Stationery Co., Colorado Springs, Colorado

63
52224
Book
1652
Page
421

NORMAN B. BODINGER,
JOHN F. HUGHES,
to
WHOM IT MAY CONCERN.

INSTRUMENT DECLARATION OF RESTRICTIONS AND PROTECTIVE COVENANTS
Dated October 9, 1957.
Acknowledged October 9, 1957, before John F. Bennett, Notary Public in El Paso County, Colorado. (Seal)
Recorded October 22, 1957.

The undersigned Norman B. Bodinger and John F. Hughes, owners of the lots and blocks within Addition No. 4 to Pine Hills, El Paso County, Colorado, being desirous of establishing restrictions and protective covenants applicable to and for the benefit of each and every lot in said Pine Hills Addition No. 4, and in consideration of the mutual declarations herein made and future purchases and conveyances of real property in said Subdivision, declare that all of the real property embraced therein is and shall be used, held and transferred subject to the following restrictive and protective covenants, which are declared to run with the land; these covenants shall be enforceable by owners of real estate in Pine Hills and all additions thereto.

1. Dwellings erected upon said lots shall contain a minimum of 1100 square feet of floor space for each family dwelling unit, exclusive of basement, garage or detached outbuildings. This restriction shall also apply to temporary or seasonal dwellings or cottages.

2. No barn or animal shelter shall be erected within 50 feet of any property line of the owner erecting such barn or animal shelter. Livestock and domestic fowl shall be fenced or secured so that they shall not be able to wander at large at any time.

3. No use shall be made of nor any activity carried on upon any lot or portion of any lot which shall create an undesirable or objectionable condition to the use of adjoining property as a residence, whether by reason of unsightliness, noise or odors. No lot or portion thereof shall be used as a public or private dump and refuse, trash or garbage in any quantity shall not be deposited or dumped upon any lot unless it is the refuse, trash or garbage of the dwelling, and in that event it must be completely buried and not left exposed to open air or sight at any time. No mechanical or automobile parts, machines or parts of machinery, nor any property held for sale or trade, building construction materials to be used off the premises, salvage items or property, old automobiles to be wrecked or any other chattel property of an unsightly nature shall be stored in the open, but such materials if kept or stored on the premises shall be entirely enclosed within a roofed building and not visible from the outside. Garbage shall not be burned on the premises in such manner as to create noticeable odors. It is the intent hereof to afford protection in addition to the protection afforded by the law relative to public or private nuisances and by the zoning laws.

Because of planned LAKE

Note: sewage area!

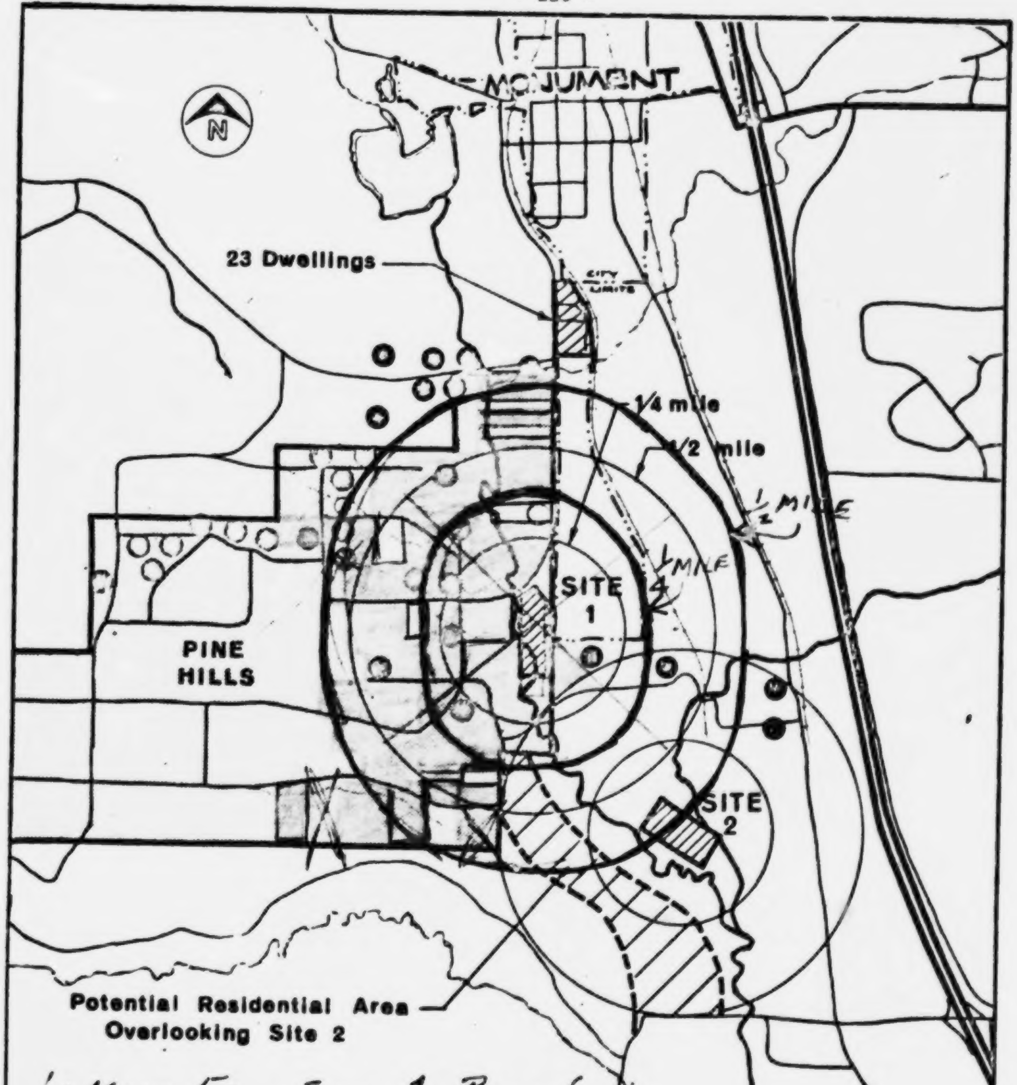
4. No dwelling shall be built or placed on any lot or portion thereof having an area of less than one acre; no lot or portion thereof shall be used for purposes other than residential, (unless a dwelling used as a residence shall also be maintained and so used upon the premises.) Block Two shall be excepted from this paragraph.

5. No structure of a temporary character, trailer, basement house, tent, garage, barn or outbuilding shall be used on any lot at any time as a human habitation, either temporarily or permanently.

6. No gravel pit or sand pit shall be maintained or operated on any lot.

66

EXHIBIT C


N
MONUMENT
23 Dwellings
CITY LIMITS
1/4 mile
1/2 mile
1/2 MILE
1/4 MILE
SITE 1
PINE HILLS
SITE 2
Potential Residential Area Overlooking Site 2

1/2 Mile From Site 1 Boundaries

1/4 Mile From Site 1 Boundaries

LEGEND

● **EXISTING DWELLINGS**

FIGURE 7

RESIDENTIAL IMPACT
SITE 1 & SITE 2

Exhibit D

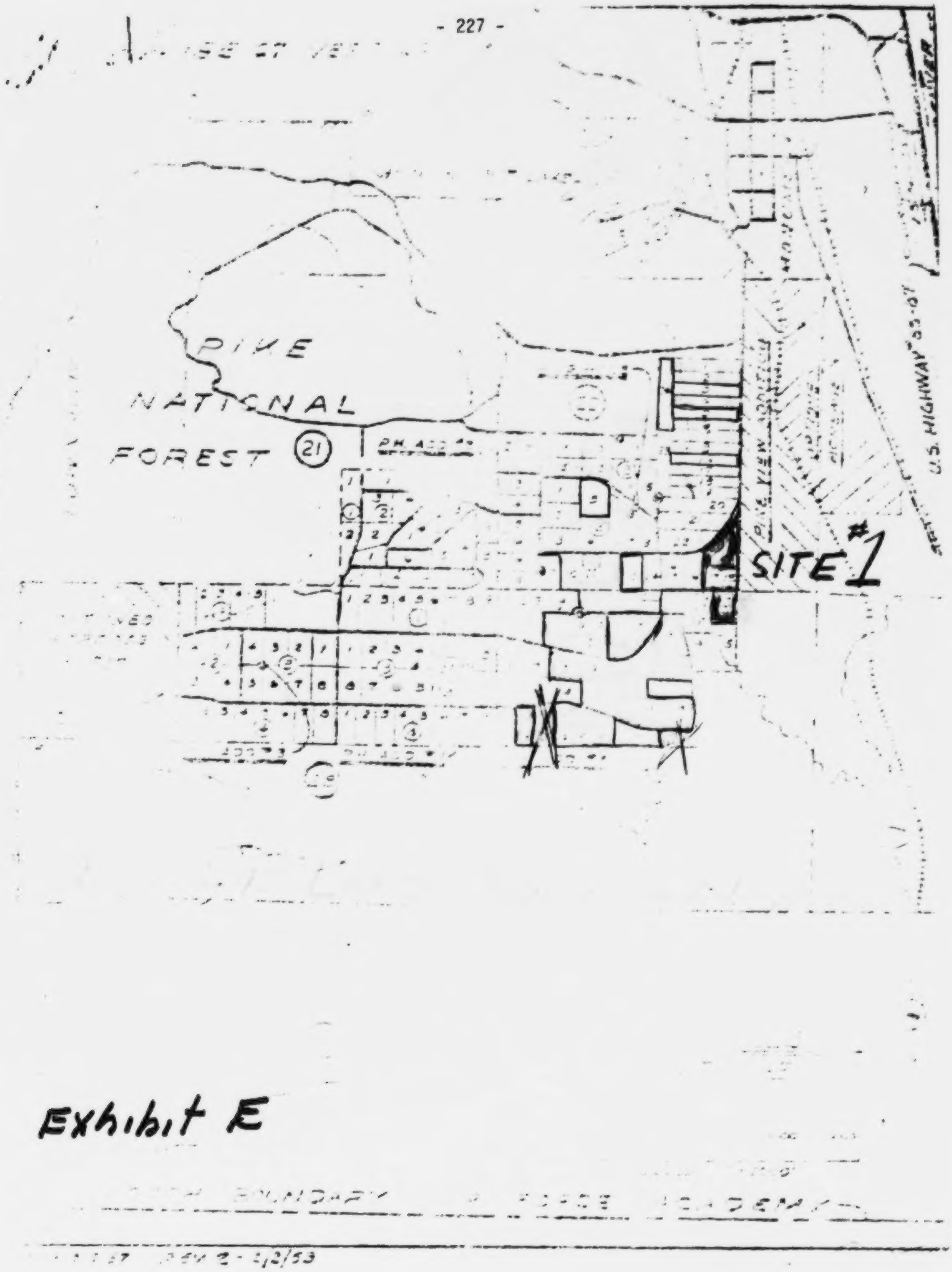

PIKE
NATIONAL
FOREST
21
PIKE VIEW ADDITION
U.S. HIGHWAY 85-87
SITE #1
BOUNDARY
FORCE ACADEMY
REV 2 - 2/2/53

Exhibit E

Recorded at 1 o'clock A. M., AUG 19 1964
Reception No. 362801 HARRIET BEALS
BOOK 2029 PAGE 956

DEED

KNOW ALL MEN BY THESE PRESENTS, that PINE HILLS, INC., a Colorado corporation, for the consideration of TEN DOLLARS ($10.00) and other good and valuable considerations in hand paid, hereby sells and quitclaims to THE MONUMENT SANITATION DISTRICT, a sanitation district formed in Civil Action No. 43381 in the District Court of El Paso County, Colorado, its successors and assigns, the following real property, situate in the County of El Paso and State of Colorado, to-wit:

Lot 3 in Block 2, Pine Hills Addition No. 4,

so long as the land is used for an oxidation pond, sometimes referred to as a "lagoon", in connection with the operation of the sewer system of the said MONUMENT SANITATION DISTRICT, its successors and assigns,

> RESERVING, HOWEVER, to the Grantor, any and all water rights which may accrue or develop from the operation of the said oxidation pond,

with all the appurtenances thereto.

DATED this 18th day of August, 1964, at Colorado Springs, Colorado.

(Corporate Seal)
ATTEST:

Norman B. Bodinger
Norman B. Bodinger, Secretary

PINE HILLS, INC.

By [illegible]
John F. Hughes, President

STATE OF COLORADO)
ss.
County of El Paso)

On this 18th day of August, 1964, the within and foregoing instrument was acknowledged before me by JOHN F. HUGHES, President, and NORMAN B. BODINGER, Secretary of PINE HILLS, INC.

WITNESS my hand and official seal.
My commission expires: [illegible]

[illegible]
Notary Public.

Received December 26, 1956 at 10:46 A.M.
Reception No. 23412-Charles Ozias-Recorder

1608 127

DECLARATION OF RESTRICTIONS
AND
PROTECTIVE COVENANTS

The undersigned [illegible] B. [illegible] and JOHN F. HUGHES, owners of the [illegible] Pine Hills, El Paso County, Colorado, being desirous of establishing restrictions and protective covenants applicable to and for the benefit of each and every lot in said Pine Hills, and in consideration [illegible] declarations herein made and future purchases [illegible] real property in said Pine Hills, declare that all of the real property embraced within said Pine Hills is and shall be used, held and transferred subject to the following restrictive and protective covenants, which are declared to run with the land:

[illegible] erected upon said lots shall contain a minimum of [illegible] square feet of floor space for each family dwelling unit, exclusive of [illegible] garage or detached outbuildings. This restriction shall [illegible] to temporary or seasonal dwellings or cottages.

[illegible] shall be erected within [illegible] feet of any [illegible] animal shelter. Livestock [illegible] that they shall not be allo[illegible] at any time.

[illegible] activity carried on [illegible] any lot [illegible] undesirable or objectionable [illegible] a residence, whether by [illegible] lot or portion thereof shall [illegible] refuse, trash or garbage [illegible] it is the refus [illegible]

[illegible]

Hughes

COLORADO STATE DEPARTMENT OF PUBLIC HEALTH
Engineering & Sanitation Division

NOTICE OF RECEIPT OF PLANS

TO: M. F. Schafer, M.D., Director
El Paso City-County Health Department
501 No. Foote Street
Colorado Springs, Colorado

Date: April 10, 1963

1. Plans, ~~xxx~~ and specifications for Public Sewerage System for most of the town of Monument. were received in this office this date.

   They are now being reviewed and it is planned to release them April 25, 1963
   Date

2. We would appreciate your comments on this project and ask you to return only one copy of this form with appropriate information as indicated below.

3. Enclosed is the Request for Review form filled out by the owner which should be retained for your file.

4. Please return 1 copy of this form as soon as possible.

5. The plans are being reviewed by [illegible]

Name

FROM: El Paso City-County Health Department
Name of Department

TO: Colorado State Department of Public Health

1. The plant site ~~is~~ is not in a zoned area. Check This

   Zoned Jan 4 1955

   If it is, the area is zoned for

2. I approve ~~do not approve~~ of the location of this facility.

3. REMARKS:

Exhibit F

Date: April 12, 1963

John A. Prem, Director
Signature of Local Health Dept. Official
San.PHE 42:50-54.1 (Rev. 12/62
Environmental Health Services

Mail in duplicate to: COLORADO STATE DEPARTMENT OF PUBLIC HEALTH
DENVER, COLORADO

DATE [illegible]

REQUEST FOR REVIEW OF PLANS AND SPECIFICATIONS FOR PUBLIC SEWERAGE FACILITIES

FROM: Monument Sanitation District
(Name of Municipality, District, Industry or other Owner)

BUSINESS ADDRESS Monument, Colorado Phone Number [illegible] ([illegible])

TO: Colorado State Department of Public Health, Sanitation Division.

1. It is requested that the following plans, specifications, reports, and design information be reviewed by your Department:

List of Documents: Construction drawings and specifications

(Note: Design data on all treatment units must be submitted)

2. After you have reviewed these plans and documents it is requested that our Municipality, District, etc., be advised as to the following:

A. What sanitary defects were found?

B. Do the facilities on the plans comply with Colorado State Department of Public Health design standards and if not, what recommendations do you have for modifications in design?

C. Do you feel the sewage treatment facilities will produce an effluent complying with requirements of the State of Colorado when these facilities listed in Item 1 are completed?

D. Does the Colorado State Department of Public Health feel any substantial nuisance is apt to arise from the facilities proposed or from the effluent discharged?

E. What are the recommendations concerning the proposed project?

3. Below is a brief description of the improvements proposed: Public sewerage system for most of the Town of Monument. The portion not included is sparsely populated and cannot be served by gravity sewer.

over

Page 2

Manhole distances are less than [illegible] ft.

Data on proposed sewer: (Must be complete for all sewer projects)

[illegible] feet 8 in. Min. slope [illegible] ft. per 100 ft. Max. distance between manholes [illegible]

____ feet ____ in. " " ____ " " " " " " " " ____

____ feet ____ in. " " ____ " " " " " " " " ____

____ feet ____ in. " " ____ " " " " " " " " ____

Total number of manholes [illegible] .

4. The sewage is to be discharged as follows: (Give description of treatment works, estimated volume of sewage, estimated treatment efficiency, rate of flow in receiving stream, etc.)

✓ Treatment works consist of 1.1 acre Oxidation Pond, initial volume will be about

✓ 14,000 gpd average, supplemented by creek water through special intake to keep pond

✓ wet until it seals itself; treatment efficiency, [illegible]% plus; minimum flow in Fountain

✓ Creek, the receiving stream, is about 5 second feet.

5. The following information is supplied.

A. Name of Design Engineer George L. Williams

B. Is Design Engineer registered? yes In what state? Colorado and New Mexico

C. Estimated cost of project $[illegible]

D. Total money available for project None - until bond issue passes.

E. Method of Financing Bond Issue to be voted on April 23, 1963

F. Date expected to call for construction bids Bids opened March 25, 1963

G. Expected date of completion of construction July 15, 1963

✓ H. Population to be served by planned facilities 20[illegible] plus 140 school students

I. Number of taps to be served 60

Signed ________ Title ________
Signature of Mayor, City Manager, District Official or Owner

[illegible] Sanitation District

San: PHE 60 (Rev. 5-58-10)

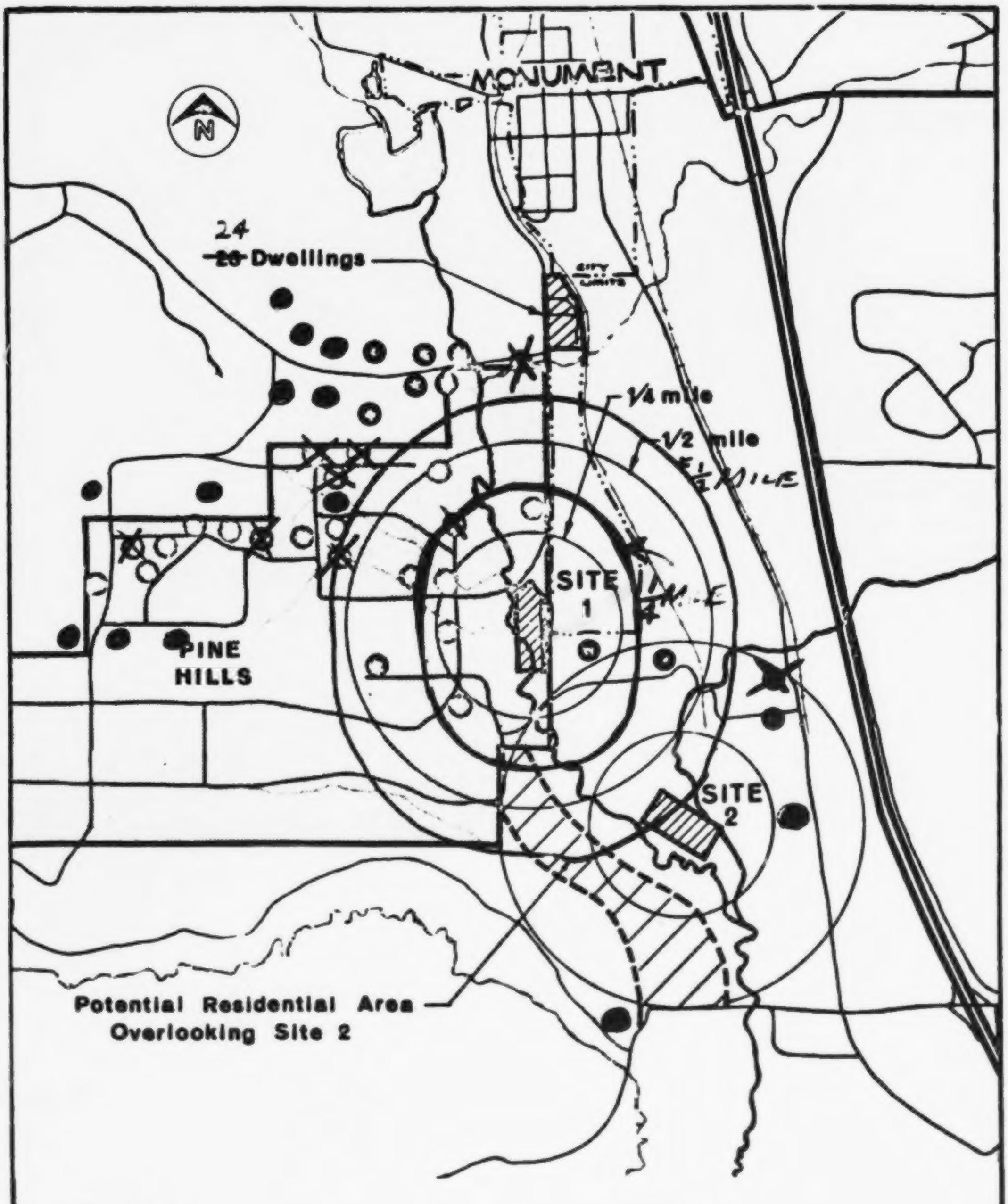

MONUMENT
N
24
~~20~~ Dwellings
CITY LIMITS
1/4 mile
1/2 mile
1/2 MILE
SITE 1
MILE
PINE HILLS
SITE 2
Potential Residential Area Overlooking Site 2
LEGEND
● EXISTING DWELLINGS

FIGURE 7

RESIDENTIAL IMPACT
SITE 1 & SITE 2

Exhibit G

DONALA
Water and Sanitation District

July 22, 1974

Brigadier General Charles W. Lenfest
2755 Doolittle Road
Monument, Colorado 80132

Dear General Lenfest:

The information on our sewage treatment requested by your letter of 19 July 1974 follows:

1. The treatment plant is a "tertiary" system. The third stage consists of sand filters. Our design engineers could give you a more explicit description - but not in time for this writing.

2. The plant has been designed to process one million gallons per day. One-fourth of this capacity has been constructed and is now on line. The building containing the filters, blowers, laboratory, etc. will accommodate one-half the design capacity. The effluent disposal now built will handle the full design capacity.

3. The treated effluent is pumped into a lake which constitues the storage reservoir for golf course irrigation.

4. Our engineering firm was Meurer, Serafini and Meurer, Denver.

5. Costs and year of expenditure
   a. Engineering: Approximately $30,000, 1973-1974
   b. Construction: Approximately $300,000, 1973-1974 (The next .25 million gallon increment will require one clarifier tank and two sand filters only.)

6. Gross estimate of cost to expand to design capacity: $500,000 (in 1973 dollars). Expansion schedule will be a function of population growth in the District. Anyone's guess is as good as mine, but the initial guess was that design capacity would be needed by 1983.

Cont'd...

Exhibit H

13805 Donala Drive / Colorado Springs, Colorado 80908 / Telephone (303) 495-2110

Brigadier General Charles W. Lenfest
Page Two
July 22, 1974

The foregoing is necessarily sketchy because your schedule required that I pull the answers from my head rather than from our files. We will be happy to develop more precise information if you desire.

Sincerely,

George E Brown
kff

George E. Brown
President

kff

2755 Doolittle Road
Monument, Colo. 80132

19 July 1974

Donala Water and Sanitation District
13805 Donala Drive
Colorado Springs, Colo. 80908

Dear Sirs:

I am involved in Public Hearings called by the Environmental Protection Agency (EPA) concerning a waste water treatment facility for Palmer Lake, Monument and Woodmoor. I believe that your experience in the field of sewage disposal may be useful to the communities and to the Public Hearing.

I am interested only in your sewage disposal plant. Specifically:

1. General description of the type of disposal system?
2. Design rating of the plant (gallons per day)?
3. Disposition of the effluent?
4. Engineering firm?
5. Total cost and year of expenditure?
    - Engineering
    - Construction
6. Gross estimates of cost and time element of expansion in the future?

I would greatly appreciate any information you could provide on the above questions. Thank you.

Sincerely,

Charles W. Lenfest

24 August 1974

RECEIVED
AUG 27 1974

Mr. John A. Green
Regional Administrator
EPA, Region VIII
Denver, Colorado

Re: Draft Environmental Statement,
Palmer Lake Sanitation District,
Project #080306

Dear Sir:

This information is supplemental to our Group's letter of 14 August 1974 on the same subject. This supplemental information was not available on 14 August 1974; however, we feel that it has a significant bearing on this project.

On 15 August 1974 the El Paso Board of County Commissioners unanimously approved the concept of the Black Forest Preservation Plan. Further review of the Plan is now underway and the Commissioners are scheduled to hold a final meeting on the Plan on 30 August 1974. The El Paso County Planning Department does not believe that significant changes will be made in the Plan - primarily, the work underway is to include more amplifying details.

The Black Forest Preservation Plan includes an area of approximately 164 sq. mi. (approximately 10 miles north/south and 16 miles east/west) located east of I-25, south of State highway 105 at Monument. The original Woodmoor development, 8500 population, p. 29, CH2M assessment, is not included in the Plan, as State highway 105 forms the south boundary of Woodmoor. The Woodmoor Expansion (823 acres, 3500 population by 1990 - Source, Master Plan) is included in the Plan. The Woodmoor Expansion Master Plan calls for treatment of sewage at Site 1, although the 3500 population was not included in the CH2M Assessment of Project #080306. Of more importance, however, the Black Forest Preservation Plan Composite Alternative calls for a medium to high density population and commercial area on approximately 4 sq. mi. of land immediately south of State Highway 105. This area is identified as the "Woodmoor Area" and includes 2524 total acres, 1901 residential acres and a possible total population of 14,879 with 2.4 dwelling units per acre and 3.3 population per dwelling unit, including "Woodmoor Expansion", which is located in the western one-third of the "Woodmoor Area". Practically all of the "Woodmoor Area" is at elevation above Site 1 and could be expected to plan to utilize Site 1 for sewage disposal, as the homes in the Woodmoor Expansion now utilize Site 1. This possible increase in population would more than double the approximate 12,000 population ("CH2M, page 29) now being planned for Project #080306.

The purpose of the Black Forest Preservation Plan is "....inventory resources and recognize potential problems.......merely defines parameters for Black Forest transition......utilize plan as a feasible tool operated within an extended time frame continuum...... The time reference is indeterminate to emphasize on-going nature of the growth process." The goal is the "..... economic growth within a rational and ecological framework." The populations are maximum numbers for the land, based upon the planning factors utilized and the water resources available and do not indicate a plan for attainment of a specific population in any particular time frame.

The Black Forest Preservation Plan provides general water and sewage guidelines, with details to be worked out during the on-going planning process. However, these guidelines include:

"Effective methods of water retention must be introduced....." (p. 5-15).

"......Includes the necessity for closing the system through use of sewage transport and treatment facilities which show maximum retention of water within the study area". (p. 5-16).

"......assume 90% use of water now lost in runoff" (p. 5-16).

Our Group does not feel that present consideration of Site 1 for Project #080306 are compatible with these guidlines.

In summary, the Black Forest Preservation Plan appears nearing final approval by the El Paso County Commissioners. The Plan designates a new medium to high density population and commercial area east of Site 1, Project #080306 and at higher elevations. Exact populations by time frame are not as important as is the designation of the area for medium to high density growth. None of this planning guidance has been considered in Project #080306. Instead, Project #080306 is considering a marginal facility at Site 1 for a population of approximately 12,000 by 1990 (CH2M, p. 29). Project #080306 apparently does not include any of the area or population estimates of the Black Forest Preservation Plan. The CH2M Assessment, p. 60, states: "....capability of the plan (Site 1) to meet standards beyond its initial 7,000 population design is also questionable", and page 85 states: "It will probably accommodate population increases to 1985 or 1990, but beyond this time a new location may be required.....". Finally, the Black

Mr. John Green
Regional Administrator, EPA Region VIII
Re: Draft EIS, Palmer Lake San. Dist., Project #080306
24 August 1974
Page 2.

Forest Preservation Plan guidelines for water conservation certainly are not reflected in consideration of Site 1 with all effluent discharged to Monument Creek (1.4 mgd.). As an example, the Pikes Peak Area Council of Governments Water Quality Management Plan of 1970 calls for proposed new wells between 1970-1990 as follows: Palmer Lake - 5 wells; Monument - 2 wells; original Woodmoor Development north of State Highway 105 - 22 wells (Plate 4A-E, Report #2, Monument, Palmer Lake, Woodmoor Basins, draft October 14, 1969, Nelson, Haley, Patterson and Quirk).

Our Group recommends that Project #080306 take into consideration the new data provided in the Black Forest Preservation Plan which designates the new "Woodmoor Area" as a medium to high density population and commercial area and which provides guidelines for the conservation of water resources.

Our Group is available for further consultation.

Sincerely,

C. W. Lenfest
Representative of 45 Pine Hills Landowners
Opposing Site 1.

copy: El Paso County Commissioners
Pikes Peak Area Council of Governments

RESPONSE TO CHARLES LENFEST

The response is in the same order as the comments presented.

Introductory paragraph: The 400' and 800' dimensions given are generally correct. The crest elevation of the two additional lagoons is 6,846' MSL with the floor of lagoon #1 being at elevation 6,828' MSL (below existing ground surface) for a vertical difference of 18 feet between the two elevations. Though the distance from floor to levee crest is 18 feet, the levees would be only about four feet above the elevation of Arnold Drive (6,842' ± MSL) near the bridge over Monument Creek.

First: No response necessary.

Second: No response necessary.

Third: Several inaccuracies in the CH2M assessment were pointed out at the public hearing, e.g. minor inaccuracies in addition of population figures, several errors in addition of alternative cost figures, errors in location of residences on Figure 10 of the assessment only one of which was within a one-half mile distance of either Site 1 or 2.

Prior to initiation of work on the assessment representatives of CH2M met with EPA to discuss alternatives to be considered in the study. At that meeting a decision was made to study the following: (1) separate facilities for each district, (2) a site for all three districts at a location generally described as about a half-mile downstream from the existing Monument lagoon, and (3) a site in the vicinity of the Air Force Academy.

EPA supports the site selection criteria used by CH2M and discussed on page 53 of the assessment. There is no limit to the number of sites and alternatives that may be studied. The alternatives that have been studied provide a sufficient basis for selection of the project to be constructed.

It should be stated that only rarely would one be likely to encounter a site that met all selection criteria. For example, selection of Site 5 (Woodmoor only) was criticized at the public hearing and in written comments because of (1) unstable soils in the area, and (2) proximity to the town of Monument. Yet from a service standpoint Site 5 would provide gravity service for the Woodmoor district except for the extreme southern portion (Higby Road area). Location of a facility toward the center of the district could eliminate pumping of effluent for golf course irrigation (if feasible), but would be extremely undesirable from a service standpoint. EPA feels that Site 5, as well as all the other sites, were fairly selected and evaluated and that no more sites need to be studied.

Fourth: EPA's response to comments on the flood hazard are discussed below.

1. Environmental Impact

   a. Flood hazard - The floodplain information study prepared by the Corps of Engineers for Monument Creek extends only to stream mile 10.65 and estimates the intermediate regional flood (100-year flood) for the reach from Templeton Gap Outlet to mile 10.65 to be 31,000 cubic feet per second (cfs).

      The project would be located in the floodplain as evidenced by the fact that the Monument lagoon was severely damaged in the 1965 flood. The project, which is above this reach, is designed for protection against a flood of 20,000 cubic feet per second which is believed to be a reasonable approximation of the 100-year flood at the site.

      The levee crest of the new lagoons would be at elevation 6,842' MSL, four feet above the estimated 100-year discharge of 20,000 cfs. During this discharge, the existing lagoon would be inundated, but would not be expected to suffer only minor damage because of the protection afforded by the upstream lagoons. The existing lagoon would contain a generally high quality of effluent which would not add significantly to the pollution load of the stream during flood conditions. Because of these factors, flood protection of the existing lagoon is not warranted.

      The facility at Site I would not contribute to increased flooding as the road and bridge immediately upstream are the major factor in backwater determinations.

      The Corps of Engineers has reviewed the draft environmental statement and offered no significant comments.

   b. Selection and Evaluation of Alternatives - See previous response regarding selection and evaluation of alternatives.

2. An examination of Attachment D shows that on May 17, 1971, the El Paso Board of County Commissioners approved only the service plan for the Palmer Lake Sanitation District.

3. No response necessary

4. EPA does not believe a total mill levy of 94 to be exorbitant for a community. The existing Palmer Lake Sanitation District 10 mill levy is included in the 94 mills. It was established beyond a doubt at the public hearing that without

revenues next year the District mill levy will have to be increased to 26 mills. Assuming a system goes into operation next year, revenue would be coming in to offset to a certain extent an increase in the mill levy. However, increased costs due to inflation could well result in a levy approaching 26 mills even with operating revenues. This is an extreme tax burden for only sewer service and wastewater treatment.

5. The application referred to in this comment was made to the Colorado Division of Local Government for approximately $207,000. A complete financial review would be required prior to awarding the grant. At present there is no assurance that the District would receive this grant nor when it might be received if approved.

   The 1990 population projections show that the Palmer Lake Sanitation District would utilize approximately 19 percent of the capacity of the facility in that year. The population projections further show that in the initial year of operation (assumed to be 1975), Palmer Lake would utilize approximately 42 percent of the capacity. Therefore, it is unreasonable to base percentage participation on only one year (1990). The participation figures developed by NHPQ - Palmer Lake 3/7, Woodmoor 3/7, and Monument 1/7 - appear to be reasonable.

6. EPA believes that some of the sites in the vicinity of the facility at Site I would be less desirable for homesites (see Figure 9). To a lesser degree, homesites up to 1/4 mile from the facility site may be affected. Beyond 1/4 mile from the site, the impact is considered insignificant.

7. Concur with this comment.

Response to Group Recommendations submitted by Charles Lenfest

1. EPA has concluded that (1) it is financially infeasible to relocate the facility site, (2) there is essentially no possibility of obtaining agreement among the three sanitation districts to utilize Site 2, and (3) the existing situation with septic tank systems in Palmer Lake is more severe than the original evaluation indicated. Therefore, Site I has been selected.

2.a. The firm of Nelson, Haley, Patterson and Quirk has analyzed the flood hazard at Site I and, based on its analysis, has designed sufficient flood protection measures into the project. The bridge and road (Arnold Avenue) upstream from the facility are the determining factor in backwater determinations rather than the proposed facility. A Corps of Engineers flood analysis (flood plain information study) would probably cover the reach of Monument Creek from mile 10.65 upstream to the upper reaches of the creek. Such a study would define the 100-year floodplain for Monument Creek, but would require a significant period of time for completion.

Landscaping requirements would be included at Site I.

b. EPA believes that sufficient alternatives have been evaluated. See previous response regarding alternatives.

c. The final statement provides information of financial status of the Districts.

d. EPA believes the financial liability (distribution of costs) has been satisfactorily established by NHPQ. See response to comment 5.

e. The Colorado Department of Health will not allow a temporary hookup of Palmer Lake to the existing lagoon.

The following response applies to Attachment A, Preliminary Flood Analysis

3b. The Intermediate Regional Flood (100-year) would inundate the existing lagoon and chlorination chamber. Protection afforded by construction of the additional lagoons upstream should result in minimal damage to the existing lagoon. Further, the wastewater contained in the existing lagoon would be of high quality and would not add a significant amount of pollution to the floodwaters.

3d,e. Construction of the project is not expected to induce additional flooding on private property during passage of the design flood (20,000 cfs). Backwater determinations upstream from the project are influenced by the bridge and road immediately upstream.

3f. As the wastewater in the existing lagoon would be of high quality, a bentonite seal is not considered necessary.

4. Previous responses have covered the points raised in this comment.

The responses below are made to comments in Attachment B, Analysis of Alternatives

Sufficient alternatives were selected and evaluated to make a recommendation for the site to be used. EPA believes that the alternatives were fairly selected and evaluated and that no further alternatives need be evaluated, e.g., a site on the Beaver Creek Ranch.

A tertiary plant similar to the Donala plant has been constructed by the Parker Water and Sanitation District, Parker, Colorado. The plant has an initial capacity of 250,000 gallons per day and may be expanded in increments to approximately 2.5

million gallons per day. The bid price for this facility was $321,000 in 1972. To this must be added approximately 15 percent for engineering and legal fees for a total plant cost of about $370,000 (excluding flood protection.) This compares favorably with the figures reported by the Donala Sanitation District. The estimated costs for the Palmer Lake system in 1975 are $420,000 - 490,000 which is reasonable considering the continuing inflation in construction costs.

Alternative A (Site I), Advantages

1. No response necessary

2. See previous response regarding a site for Woodmoor.

3. The impact of the existing lagoon would continue, but not in its present state. Where the lagoon is presently grossly overloaded, this would not be the case with the expanded facility. The commitment of the area to wastewater treatment use would continue for the life of the facility. Site selection was not made on the basis of the fact that a lagoon presently exists at Site I, but rather this was a legitimate alternative to be considered in selecting a project.

4. EPA recognizes conflicting views regarding the marsh below the existing lagoon. From a standpoint of the wildlife habitat that has been created, retainment of the marsh is desirable; however, from the standpoint of the Colorado Department of Health (as indicated in 1971) retainment would be undesirable because of mosquito harborage and breeding.

5. No response necessary.

6. The project at Site I should not encourage urban development in Pine Hills, as this area would depend on septic tank systems for low density development and would not be served by the Palmer Lake Sanitation District project.

7. EPA's interpretation of "economical interim solution" is that should future needs change from those now projected, then Site I provides an economic solution in the interim. Based on present knowledge, however, Site I is expected to provide a relatively long term solution to the wastewater treatment needs of the area.

   Adequate flood control measures are included in the estimated project cost.

8. The planned expansion of the lagoon system is by installation of additional aeration grids rather than by lagoon additions. This should make the system adequate until at least 1990. NHPQ feels the useful life of the facility would extend past 1990.

   The population projection of approximately 12,000 by 1990 is believed to be more realistic than the projection of 18,300 by the same year. No adverse comments regarding population projections were received from any governmental units, either at the hearing or in writing.

Alternative A (Site I) Disadvantages

No response necessary.

Alternative B (Site 2) Advantages

No response necessary.

Alternative B (Site 2) Disadvantages

1. There is apparently a conflict in the estimated costs of an access road. While the figure of $10,000 per mile is significantly lower than the total of $36,000 submitted by NHPQ, Site 2 remains financially infeasible.

2. The removal costs for the existing lagoon would be borne by Mr. Bodinger, who estimates them to be nominal.

3. The facility at Site I would probably induce a higher degree of development in the Districts than presently exists with inadequate wastewater treatment. Residential development in Pine Hills would likely be inhibited in the immediate vicinity of Site I (figure 9 in EIS) but the vast majority of Pine Hills should not be affected by the facility.

4. No response necessary.

5. No response necessary.

6. The sanitation districts have agreed to a joint facility at Site I. The Monument Sanitation District has indicated its intent to withdraw from the agreement should Site 2 be selected. Separate facilities for each district would be expensive and not in the best interest of good wastewater management.

7,8. Adequate costs for flood protection at Site I are included in the estimates.

DARRELL D. THOMAS
ATTORNEY AT LAW
SUITE 202 HARRIS BUILDING
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COLORADO SPRINGS, COLORADO 80902

AREA CODE 303
TELEPHONE 636-3301

August 15, 1974

RECEIVED
AUG 19 1974
OFFICE OF [illegible]
[illegible]

Mr. Jerry Raisch
Office of the Regional Council
Environmental Protection AGency
1806 Lincoln Street
Denever, Colorado 80202

Re: Palmer Lake Sanitation District

Dear Mr. Raisch:

I am enclsoing herewith Response to Objectors of Site No. 1, copy of court proceedings, Pine Hills, Inc. versus Monument Sanitation District, photographs, letters and exhibits from Palmer Lake Sanitation District and Nelson, Haley, Patterson & Quirk together with a letter from John F. Bennett, dated February 26, 1973.

I trust that these documents will be of help to the agency in the preparation of the final Environmental Impact Statement, and hope for the sake of the three districts that the statement will recommend furthering of the sewage treatment plant at Site No. 1.

If I can be of further assistance in this matter please feel free to contact me.

Yours very truly,

Darrell D. Thomas

DDT:all

Enclosures

RESPONSE TO OBJECTORS OF PROPOSED SITE NO. 1, USEAGE TREATMENT PLANT LOCATION PALMER LAKE SANITATION DISTRICT

The following is submitted on behalf of Palmer Lake Sanitation District, Monument Sanitation District, and Woodmoor Water and Sanitation District as a summary and response to the objectors to locating the joint treatment plant at the site of the current Monument Lagoon, and the funding of the portion of the construction of said plant by the environmental protection agency.

1. The transcripts of proceedings of public hearings held at the Town Hall, Palmer Lake Colorado, on Tuesday July 16, 1974, Monday July 22, 1974 and Monday July 29, 1974 show that all of the residents of all three communities support the location of the treatment facility at the proposed selection site No. 1 and that objections were raised only by the very few residents who live within a proximity of one-fourth to one-half mile from said site. Objection was raised by Norman B. Bodinger on behalf of himself and John F. Hughes and the Pine Hill Corporation, however the ariel photos enclosed as Exhibits as a part of this statement reflect that Mr. Bodinger, Mr. Hughes, and Pine Hills, Inc. have a substantial economic interest in having the treatment plant moved one-half mile down stream to the proposed selection site No. 2 by virtue of the ownership of land between the two sites and the future possibility of connecting said land to a proposed treatment plant.

2. There is enclosed with this statement a statement of the Palmer Lake Sanitation District, an economic recalculation by Nelson, Haley, Patterson & Quirk Engineers for Palmer Lake Sanitation District with specific responses to cost figures reflected in the draft environmental impact statement as well

as responses to figures presented by Charles Lenfest and Norman D. Bodinger at the public hearing. In addition there are enclosed ariel photographs of the sewage treatment facility at Woodlawn Park Colorado, an area of similar size showing a mobile home park immediately adjacent to the sewage treatment facility, which should answer any objections raised as to the proximity of residences adjacent to a sewage treatment facility. In addition ariel photographs of the Monument Lagoon location showing the ownership of land adjacent to said location. Exhibit 16 shows in yellow on the photograph the land that could be serviced for Bodinger, Hughes, and Pine Hills by location of the sewer plant at a down stream site. The other exhibits are referred to in the letter from Nelson, Haley, Patterson & Quirk.

3. Enclosed for your examination is a certified copy of the civil action, Pine Hills, Inc. vs. Monument Sanitation District which was filed in the District Court of El Paso County Colorado on October 29, 1971, which has been at issue since July 13, 1972 and which has not been pressed by Pine Hills, Inc., Mr. Bodinger or Mr. Hughes. In addition to that suit there is enclosed a letter received from John F. Bennett Attorney for Pine Hills, Inc. setting forth the attitude of Mr. Bodinger and Mr. Hughes toward the sewage treatment facility at site No. 1. It is obvious from this letter that the agreements proposed therein that the location of the plant at selection site No. 1 would be acceptable to them.

4. A consideration of the transcripts of the hearings particularly from the standpoint of the objectors indicates that all objections are based entirely upon the fact that the plant is located at selection site No. 1 would have an odor, would be unsitely and may possibly affect the value of their properties, however no definite evidence was offered

by way of appraisal or otherwise that would indicate a devaluation of property upon the location of the plant at site No. 1. Before funding of the construction of the plant at site No. 1 the agency could require that proper landscaping be done and that proper measures be planned and instituted to reduce noise and odor.

5. Specific attention is directed to the remarks of Mr. Stan Johnson commencing at Page 293 of the transcript which appear to be a very appropriate summary, particularly in view of the fact that Mr. Johnson is an El Paso County Commissioner.

6. It appears from the statements of Mr. Steiner and the answers to questions in response to Mr. Thomas, that he is one of the many purchasers of property in the area of the current Monument Lagoon and site No. 1 that purchased property based upon misrepresentations by Mr. Bodinger and Mr. Hughes. The record reflects of course that Mr. Bodinger was instrumental in having the Monument Sanitation District locate the lagoon at its current site after representations had been made to purchasers in the Pine Hills Subdivisions. It is further clear that these purchasers even after the establishment of the current Monument Lagoon at site No. 1 did nothing to prevent the location of the lagoon nor have any claims been made against any persons by reason of such location. Consequently the Monument Lagoon has been currently located at site No. 1 since 1963 or 1964, without objection from those who are now objecting to the location of the sewage treatment plant at site No. 1. Mr. Steiner indicated that his interest was instigated by Charles Lenfest, that being the reason for his current objection.

7. The agency, in its environmental impact statement at Page 69 sets forth problems associated with the selection

of site No. 2, that it, in such draft statement proposed as the final site to be financied. A review of the record of the hearings shows conclusively that these problems cannot be overcome because of the position taken by the various parties present at the hearing.

A. Detail soil investigations have not been made and cannot be made to determine whether site No. 2 is acceptable from an engineering standpoint, in as much as Mr. Owens the owners of the property orally stated that he would refuse to sell the property for the purpose of the location of the plant and would not permit entry onto the property to make such investigation.

B. Monument Sanitation District stated at the public hearing that it would withdraw from any former agreement to contribute toward the establishment of a sewage treatment facility servicing the three areas, and that it would not enter into such an agreement if site No. 2 were selected, which would prevent the selection of site No. 2 as the site to be funded by the agency.

C. Mr. Johnson in his remarks at the hearing indicated that the El Paso County Commissioners definitely would not condemn a buffer around the proposed site No. 2 to prevent the encroachment of residences on the site. Mr. Owens also indicated that the acquisition of a buffer zone from him would come only through legal condemnation proceedings. Mr. J. R. McCammon of the Palmer Lake Sanitation District stated unqualifiedly that Palmer Lake Sanitation District had no intention of condeming a buffer zone around the proposed site No. 2 as they did not approve of it in the first place as well as the inability to obtain funds for such land acquisition. It appears therefore that problem No. 3 becomes an impossibility as to the selection of site No. 2.

D. Representatives of the Pikes Peak Area Council of Governments stated at the hearing that that agency would not approve site No. 2 as the same conflicted with local land use and planning policies, and was not acceptable under the interim water quality management plan adopted by the State of Colorado and approved by the environmental protection agency.

8. The agency in its draft statement indicated that the Human Environmental Factors were weighed against ecological and economic environmental factors in making a tentative selection of site No. 2 to be funded by the agency. It was conclusively shown at the hearing that ecologically site No. 1 would have a lesser impact on the environment and that the selection of site No. 2 and the additional cost incident thereto would have a tremendous adverse impact on the economic environment of all three communities. It was in fact pointed out that the delay caused by the law suit filed against the agency by Pine Hills, Inc. would necessitate an increase in the Palmer Lake Sanitation District mill levy to 26 mills, and that a location of the treatment plant at site No. 2 would have a totally adverse economic impact on all three communities by the increase in cost as well as increase in mill levies for the payment of such increased costs.

9. Evidence presented at the hearings held at the current physicial conditions in Palmer Lake with respect to treatment of waste and sewage seriously affect the health and safety of the citizens of that town and that the immediate location and construction of the sewage treatment facility is required without the delay that would be incident to the investigations and preparations of the acquisition of a site that cannot be physicially viewed.

10. The evidence further showed that Charles Lenfest, and others who had purchased property in the vicinity of the existing Monument Lagoon and site No. 1, did so under an installment land purchase contract commencing in 1957 and subsequent years, with the delivery of a warranty deed after the full purchase price of land. Mr. Lenfest being one of the strongest objectors to the location of the sewage treatment plant at site No. 1 admitted that the building permit for his house was issued October 1, 1973 at a time when the Monument Lagoon was in existence, in view of his house, and with knowledge Palmer Lake Sanitation District had proposed the location of sewage treatment plant at site No. 1. It appears hardly equitable that a person in this situation would be considered a valid objector to the location of the treatment facility at site No. 1 after taking the actions that he did with full knowledge of the existence of the sewage treatment facility. It must be assumed in such case that the treatment facility does not affect Mr. Lenfest as much as he claims that it does. Since deeds were taken to practically all of the properties surrounding the concurrent lagoon and site No. 1 subsequent to the establishment of the Monument Lagoon, and a number of the houses built after the existence of the Monument Lagoon, there is every reason to assume that these persons are not directly affected by the lagoon and that the same encroachment would not occur at a relocated site.

In conclusion it appears that the draft impact statement arrived first at a tentative conclusion that site No. 2 should be utilized as the location for the sewage treatment work, and the draft impact statement thereafter set about to justify such location rather than view both locations in an objective. Sub-part C of the Rules and Regulations for the preparation of of environmental impact statements, provide that statements shall not be justification documents for proposed agency funding or actions, but rather shall be objective evaluations of actions and their alternatives in light of all environmental considerations. The evidence adduced at the public hearing shows conclusively that the tentative selection made by the agency was not objective and was a justification for proposed agency funding, and as such does not comply with the regulations. The results of the public hearing show that the tentative selection was not objective, and wasn't improper and that the location of the plant and the funding for such location would have such serious adverse environmental effects that it does not qualify as an alternative action, and the final draft impact statement should objectively point out that site selection No. 1 is the site that the agency should fund.

Dated at Colorado Springs, Colorado this 15th day of August, 1974.

Respectfully submitted:

Darrell D. Thomas
Attorney at Law on behalf of
Palmer Lake Sanitation District
Monument Sanitation District and
Woodmoor Water and Sanitation
District No. 1

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JOHN FERGUSON BENNETT
ALFRED HEINICKE

HOWARD MORRISON
CUBA Y. HOLLAWAY

February 26, 1973

Mr. Darrell D. Thomas
Attorney at Law
115 East Vermijo Avenue
Colorado Springs, Colorado 80902

Re: Pine Hills, Inc., vs. Monument Sanitation District

Dear Mr. Thomas:

Mr. Bodinger and Mr. Hughes have both been approached from time to time by representatives of whoever is doing the sanitation work on behalf of existing districts and Woodmoor for rights of way across property owned either by them individually or by Pine Hills, Inc. I think now might be a good time to work out a settlement of this litigation in the event we can. One of the big problems, and one that will remain with the sanitation districts irrespective of the outcome of our pending litigation, is going to be the question of nuisance, zoning, etc., etc. Mr. Bodinger suggests to me that it is quite possible to make a disposal plant look pretty much like an ordinary residence. He also suggests that a lagoon may be in an irregular shape so that it will not look like a square settling tank for sewage plant. The polishing ponds may have to be concrete structures, but the current tendency is to cover these items so that they present no objectionable appearance. We make the following suggestions for a possible settlement of this matter, hoping that an arrangement along these lines would be satisfactory to the neighbors as well as to Pine Hills, Inc.:

1. Pine Hills, Inc., will agree to the continued use of the lagoon and the five-acre tract on which it rests as a lagoon and for the further construction of treatment facilities along the lines and on the terms set out below.

2. All treatment facilities shall be housed in a building or buildings which create a residential appearance.

3. Plant facilities are not to be overloaded and treatment facilities shall be free from odors or unsightly operations, machinery, etc.

Mr. Darrell D. Thomas
February 26, 1973
Page 2

4. Ponds or lagoons shall be arranged and landscaped to present the appearance of natural bodies of water and shall not be in a square, rectangular or circular form. Polishings ponds should be placed within building or under cover.

5. Water rights will be confirmed by the district or districts using the pond as to all water passing through the treatment plant.

6. There has been a discussion as to the acquiring of additional five-acre tract below the present lagoon site, which we believe is presently owned by Pine Hills, Inc. This property could be donated to the district or districts involved, which latter must, however, hold Pine Hills, Inc., harmless from claims under the covenants and must arrange proper zoning. The same would hold true for the establishment of a treatment plant at the present lagoon site, although Pine Hills, Inc., would be willing to cooperate with the districts concerned to help obtain treatment facilities which are acceptable from all standpoints.

Very truly yours,

John

JOHN F. BENNETT

JFB:lb

cc: Mr. Norman B. Bodinger
Monument, Colorado 80132

Mr. John F. Hughes
Monument, Colorado 80132

STATE OF COLORADO)
} ss
COUNTY OF EL PASO)

IN THE DISTRICT COURT
No. 67269

I, FRANCIS J. CUCKOW, Clerk of the District Court of the Fourth Judicial District of the State of Colorado, within and for the County of El Paso, do hereby certify the above and foregoing to be a true, perfect and complete transcript and copy of Clerk's Minute, Complaint, Summons, Entry of Appearance, Notice, Answer and Counterclaim by defendant, Answer and Counterclaim by plaintiff, Notice of Lis Pendens
had and entered of record in a certain cause in said Court lately pending entitled:

PINE HILLS, INC., plaintiff

vs.

THE MONUMENT SANITATION DISTRICT, defendant

as the same now remains on file and of record in this office.

WITNESS my hand and the seal of said Court, at the Courthouse in the City of Colorado Springs, County and State aforesaid, this 2nd day of AUGUST A.D. 1974.

FRANCIS J. CUCKOW
Clerk

By Lila Arens
Deputy

DIV. 3

Pine Hills Inc. 67269 1C50 **Monument Sanitation Dist.**

7-13-72 PINE HILLS, INC. vs. THE MONUMENT SANITATION DISTRICT
67269 (J. Calvert- [illegible] -J. Bennett- [illegible])
1C50 This hearing date stricken; Answer and Counter-Claim allowed to be filed.

042101

27-372

FILED IN THE DISTRICT COURT
EL PASO COUNTY, COLORADO

OCT 29 1971

FRANCIS J. CUCKOW
CLERK

STATE OF COLORADO, COUNTY OF EL PASO
IN THE DISTRICT COURT
CIVIL ACTION NO. 67269 DIVISION NO. DIV. 3

PINE HILLS, INC.,
Plaintiff,
vs.
THE MONUMENT SANITATION DISTRICT,
Defendant.

COMPLAINT

1C50

PLAINTIFF by its attorneys, Bennett and Heinicke, complains of the Defendant and alleges:

FIRST CLAIM

1. Plaintiff is a corporation created, qualified and acting under the laws of the State of Colorado; Defendant is a special district created, existing and acting under the Statutes of the State of Colorado in Civil Action No. 43361 before this Court.

2. On August 13, 1964, Plaintiff conveyed to the Defendant, Lot 3 in Block 2, Pine Hills Addition No. 4, El Paso County, Colorado "so long as the land is used as an oxidation pond, sometimes referred to as a lagoon, in connection with the operation of the sewer system of the said Monument Sanitation District, its successors and assigns". Said deed was recorded in the office of the Clerk and Recorder, El

This summons is issued pursuant to Rule 4, Colorado Rules Civil Procedure

*If the summons is published or served without a copy of the complaint, after the word "action" state the relief demanded. If body execution is sought the summons must state "founded upon tort."

Paso County, Colorado, August 1[illegible], 1964, in Book [illegible], at Page [illegible]; a true copy thereof is attached hereto and marked Exhibit A.

3. Thereafter, said Monument Sanitation District did construct an oxidation plant sometimes referred to as a lagoon in connection with the operation of its sewer system.

4. On or about November 30, 1970, Defendant converted said oxidation pond commonly referred to as a lagoon to an aeration system stabilization pond by the installation of certain machinery and equipment and thereupon it ceased to be an oxidation pond commonly referred to as a lagoon and was not thereafter nor is it now operated as such:

5. That the provision referring to the use of the land conveyed set forth above in the deed from Plaintiff to the Defendant is not now and has not been since November 30, 1970 complied with; by reason thereof title to the said real property conveyed by Plaintiff to the Defendant should be returned to Plaintiff and Plaintiff should be restored to possession of said premises.

SECOND CLAIM

1. Plaintiff realleges each and every paragraph set out above in its First Claim.

2. That the conveyance from Plaintiff to Defendant requires that said oxidation pond sometimes referred to as a lagoon should be used in connection with the operation of the sewer system of the Monument Sanitation District: that said pond and lagoon, while being used in part in connection

042101

with the operation of Defendant, is also being used in connection with the sewer system of other districts, agencies, persons or corporations having no connection with the Monument Sanitation District and said provision has thereby been violated.

THIRD CLAIM

1. Plaintiff realleges each and every allegation contained in his First Claim above set forth.

2. That at the time Plaintiff conveyed to the Defendant the real property above described by Quit Claim Deed, Plaintiff was not the owner thereof; that Plaintiff received ownership to said property by Quit Claim Deed dated January, 1965, acknowledged January [illegible], 1965 and recorded October [illegible], 1965 in Book 2100, at Page [illegible] of the deed records in the office of the Clerk and Recorder, El Paso County, Colorado.

3. That by reason thereof Defendant obtained no title to the said real property.

WHEREFORE, Plaintiff prays that a decree be entered adjudging it to be the owner of all the right, title and interest acquired by the Defendant by virtue of any conveyance from the Plaintiff; that the conveyance from Plaintiff to Defendant and the provisions therein contained have been violated and that as between Plaintiff and Defendant the Plaintiff is entitled to the sole and immediate possession, use, occupancy and title to the said premises, and for such and other further relief as to the Court may seem proper.

BENNETT AND HEINICKE

By Robert F. Bennett
Attorneys for Plaintiff
231 E. Vermijo Avenue
P. O. Box [illegible], [illegible]
Colorado Springs, CO 80903
Tel: [illegible]

Address of Plaintiff:
231 East Vermijo Avenue
Colorado Springs, CO

1u 4 2 1 0 1 4 4

Notary Public,

2029

DEED

KNOW ALL MEN BY THESE PRESENTS, that PINE HILLS, INC., a Colorado corporation, for the consideration of TEN DOLLARS ($10.00) and other good and valuable considerations in hand paid, hereby sells and conveys to THE MONUMENT SANITATION DISTRICT, a sanitation district formed in Civil Action No. [illegible] in the District Court of El Paso County, Colorado, its successors and assigns, the following real property situate in the County of El Paso and State of Colorado, to-wit:

Lot 3 in Block 2, Pine Hills Addition No. [illegible],

so long as the land is used for an oxidation pond, sometimes referred to as a "lagoon", in connection with the operation of the sewer system of the said MONUMENT SANITATION DISTRICT, its successors and assigns,

> RESERVING, HOWEVER, to the Grantor, any and all water rights which may accrue or develop from the operation of the said oxidation pond,

with all the appurtenances thereto.

DATED this 18th day of August, 1964, at Colorado Springs, Colorado.

(Corporate Seal)
ATTEST:
Norman B. Bodinger
Norman B. Bodinger, Secretary

PINE HILLS, INC.
By
John F. Hughes, President

STATE OF COLORADO)
ss.
County of El Paso)

On this 18th day of August, 1964, the within and foregoing instrument was acknowledged before me by JOHN F. HUGHES, President, and NORMAN B. BODINGER, Secretary of PINE HILLS, INC.

WITNESS my hand and official seal.
My commission expires: [illegible]

Notary Public,

HIBIT A

189—Special—Rev. 1941 SUMMONS IN CIVIL ACTION Out West Commercial and County Printers, Inc., Colorado Springs, Colorado

IN THE DISTRICT COURT
Within and for the County of El Paso and State of Colorado
CIVIL ACTION NO. 67269

DIV. 3

FILED IN DISTRICT COURT
EL PASO COUNTY, COLORADO
NOV 22 1971
FRANCIS J. CUCKOW
CLERK

PINE HILLS, INC.,
Plaintiff
vs.
THE MONUMENT SANITATION DISTRICT,
Defendant

SUMMONS

THE PEOPLE OF THE STATE OF COLORADO,

TO THE DEFENDANT........ ABOVE NAMED — GREETING:

You are hereby summoned and required to file with the Clerk an answer to the complaint within 20 days after service of this summons upon you. If you fail so to do, judgment by default will be taken against you for the relief demanded in the complaint.

If service upon you is made outside the State of Colorado, or by publication, or if a copy of the complaint be not served upon you with this summons, you are required to file your answer to the complaint within 30 days after service of this summons upon you.

This is an action* as more fully set forth in the attached Complaint

Dated October 29, 1971

FRANCIS J. CUCKOW
Clerk of Said Court

By Lee W Phillips
Deputy Clerk

[SEAL OF COURT]

BENNETT AND [illegible]
P. O.Box 21[illegible], [illegible]
Attorney for Plaintiff
201 E. Vermijo Avenue
Colorado Springs, CO [illegible]
Tel: 634-15[illegible]
Address of Attorney

NOTE — This summons is issued pursuant to Rule 4, Colorado Rules Civil Procedure

*If the summons is published or served without a copy of the complaint, after the word "action" state the relief demanded. If body execution is sought the summons must state "founded upon tort."

STATE OF COLORADO, }
County of El Paso } ss.

I do hereby certify that I have duly served the within summons, *together with a copy of the complaint in the within entitled action, by delivering in said County and State, a copy of said summons, *together with a copy of said complaint thereto attached, to the following named defendant......, personally, on the date and at the place set opposite the name of such defendant:

Names of Defendants Served	Place of Service	Date of Service
THE MONUMENT SANITATION DISTRICT, by handing to and leaving with Charles C. Pierce, secretary thereof,	Monument, Colo.	November 18, 1971

EARL L. SULLIVAN
Sheriff

By
Deputy

*Strike according to fact.

STATE OF .... }
County of .... } ss.

...., the affiant, being duly sworn, says: that affiant is over the age of eighteen years and is not a party to this action; and that affiant has duly served the within summons by*..

Subscribed and sworn to before me this............day of............................, 19.....

My commission expires............................

(Seal of Notary)

Notary Public

*State date, place, and manner of service

No.........

SUMMONS

IN THE DISTRICT COURT
County of El Paso

.... Plaintiff......,

vs.

.... Defendant......

STATE OF COLORADO, }
County of............ } ss.
Office of the Sheriff of said County,
............, A. D. 19......
I hereby certify that I received the within Summons on the............day of............, A. D. 19......
at............o'clock......M.

.... Sheriff

By............

Sheriff's Fees

Service - - - - - -	$ 2.00
Mileage - - - - - -	8.00
Return - - - - - -	
Total - - - - - -	$ 10.00

.... Attorney for Plaintiff

Filed this............day of............, A. D. 19......

.... Clerk

By............ Deputy

IN THE DISTRICT COURT WITHIN AND FOR
THE COUNTY OF EL PASO AND STATE OF COLORADO
Civil Action No. 67269
Division No. 3

FILED IN DISTRICT COURT
EL PASO COUNTY, COLORADO
DEC - 7 1971
FRANCIS J. CUCKOW
CLERK

PINE HILLS, INC.,
Plaintiff,
vs
THE MONUMENT SANITATION DISTRICT,
Defendant.

ENTRY OF APPEARANCE

COMES NOW, Darrell D. Thomas, Attorney at Law, 115 East Vermijo Avenue, Colorado Springs, Colorado 80902 and enters his appearance on behalf of the Defendant in the within action.

Respectfully submitted,

Darrell D. Thomas

Darrell D. Thomas
Attorney for Defendant
115 East Vermijo Avenue
Colorado Springs, Colorado 80902
636-3301

I certify that I have mailed a copy of the above and foregoing document in U.S. [illegible] Prepaid, to [illegible] addresses [illegible] 7th day of December 71

Darrell D. Thomas

STATE OF COLORADO, COUNTY OF EL PASO

IN THE DISTRICT COURT

CIVIL ACTION NO. 67269, DIVISION NO.3

PINE HILLS, INC.,

Plaintiff,

vs.

THE MONUMENT SANITATION DISTRICT,

Defendant.

NOTICE

FILED IN DISTRICT COURT
EL PASO COUNTY, COLORADO
JUL 1 1 1972
FRANCIS J. CUCKOW
CLERK

TO: The Defendant above named, THE MONUMENT SANITATION DISTRICT, and to its attorney of record, DARRELL D. THOMAS:

YOU ARE NOTIFIED that on Thursday, July 13, 1972, at 8:30 o'clock A.M., in Division 1, El Paso County District Court, Court House, Colorado Springs, Colorado, Plaintiff will apply for Judgment by default against Defendant for failure to file a responsive pleading.

BENNETT,HEINICKE,MORRISON & HOLLAWAY

By John F. Bennett
Attorneys for Plaintiff
231 East Vermijo Avenue
P. O. Box 2168, 80901
Colorado Springs, CO 80903
Tel: 634-1556

CERTIFICATE OF MAILING

I hereby certify that a true copy of the foregoing Notice was mailed to Darrell D. Thomas, Attorney for Defendant, 115 East Vermijo Avenue, Colorado Springs, CO 80902 on July 7, 1972, postage prepaid.

John F. Bennett
One of the Attorneys for Plaintiff

IN THE DISTRICT COURT WITHIN AND FOR
THE COUNTY OF EL PASO AND STATE OF COLORADO
Civil Action No. 67269
Division No. 3

FILED IN DISTRICT COURT
EL PASO COUNTY, COLORADO
JUL 13 1972
FRANCIS J. CUCKOW
CLERK

PINE HILLS, INC.,
Plaintiff,
vs
THE MONUMENT SANITATION DISTRICT,
Defendant.

ANSWER AND COUNTERCLAIM

COMES NOW, the Defendant by and through its attorney, Darrell D. Thomas, and in answer to the Plaintiff's Complaint admits, denies and alleges as follows:

FIRST DEFENSE

Plaintiff's Complaint fails to state a claim upon which relief can be granted.

SECOND DEFENSE

1. The Defendant is without sufficient knowledge or information with which to form a belief as to the truth of the allegation that Plaintiff is a corporation created, qualified and acting under the laws of the State of Colorado therefore, Defendant denies the same. Defendant admits that it is a special District created, existing and acting under the Statutes of the State of Colorado.

2. Defendant admits the allegations contained in Paragraph 2 and 3 of Plaintiff's Complaint.

3. As to Paragraph 4 of Plaintiff's First Claim, the Defendant admits that on or about November 30, 1970 at the request and requirement of the Colorado Health Department, and the Colorado Water Pollution Control Board the Defendant installed in said

lagoon, an aeration system for the oxidation and treatment of effluent and denies that said lagoon ceased to be an oxidation pond but states that said lagoon has at all times been used as an oxidation pond or lagoon.

4. Defendant denies each and every allegation and request contained in Paragraph 5 of Plaintiff's First Claim.

THIRD DEFENSE

1. Defendant denies all of the allegations contained in Paragraphs 1 and 2 of Plaintiff's Second Claim for relief, and alleges that the Deed referred to in Paragraph 1 of Plaintiff's First Claim provides in part, "in connection with the operation of the sewer system of the said Monument Sanitation District, its successors and assigns". Defendant further alleges that said instrument permits the Defendant, its successors and assigns to use the lagoon as an oxidation pond and lagoon with or without aeration equipment.

Defendant further alleges that Norman B. Bodinger, Secretary of the Plaintiff, was at the time of the execution of the Deed referred to in Plaintiff's First Claim for Relief, a member of the Board of Directors of the Monument Sanitation District and was a member of said Board on April 11, 1966 when a joint use agreement was entered into between the Defendant and the Woodmoor Water and Sanitation District. That the said Norman B. Bodinger is a majority owner of the Plaintiff corporation, and has at all times subsequent to the execution of said deed known of the use of said lagoon, and as a member of the Board of Directors of the Monument Sanitation District entered into an agreement for the joint use of said lagoon, and is therefore estopped, and by his said actions and because of his control of said corporation the Plaintiff is thereby estopped to make any claim or demand against this Defendant for violation of any of the provisions of the deed referred to herein.

FOURTH DEFENSE

The Defendant is without sufficient knowledge or information with which to form a belief as to the truth of the allegations contained in Plaintiff's Third Claim for Relief and therefore denies the same.

Defendant affirmatively alleges that at the time of the execution of Plaintiff's Exhibit "A", Norman B. Bodinger, Secretary of the Plaintiff, was a member of the Board of Directors of the Defendant, and was also the owner of the property described in said instrument. At all times pertinent thereto the said Norman B. Bodinger as Secretary of the Plaintiff knew that he was co-owner with John F. Hughes, the President of the Plaintiff of the property described in said instrument, but nevertheless the said Norman B. Bodinger and John F. Hughes, Secretary and President, respectively of the Plaintiff corporation conveyed by Exhibit "A", the property to Defendant. Plaintiff has alleged that it acquired title to the property by Quit Claim Deed dated January 1965, and after the conveyance by the Plaintiff to the Monument Sanitation District on August 18, 1964. Plaintiff acquired title on January 25, 1965 by Quit Claim from Norman B. Bodinger and John F. Huges, who at the time of the execution of said Quit Claim Deed knew that they had previously executed a Deed of the property to the Defendant herein. The Plaintiff is therefore estopped to deny the title of the Defendant to the property herein.

WHEREFORE, having fully answered the Plaintiff take nothing by its Complaint and that the same be dismissed and for such other and further relief as to the court may seem proper.

COUNTERCLAIM

COMES NOW the Defendant by and through its attorney, Darrell D. Thomas, and as a Counterclaim against the Plaintiff, states and alleges:

1. That the Defendant is a sanitation district, created, existing and acting under the Statutes of the State of Colorado.

2. That on or about August 18, 1964 and prior thereto Norman B. Bodinger, was Secretary of Pine Hills, Inc., a Colorado corporation and Chairman of the Board of Directors of Monument Sanitation District.

3. Norman B. Bodinger and John F. Hughes, the President of Pine Hills, Inc. on August 18, 1964 were the record owners of Lot 3 in Block 2, Pine Hills Addition No. 4, El Paso County, Colorado, and at all times herein mentioned both the said Norman B. Bodinger and John F. Hughes were the sole stockholders of Pine Hills, Inc. On August 18, 1964 at a time when title to Lot 3 in Block 2, Pine Hills Addition No. 4, stood in the names of John F. Hughes and Norman B. Bodinger, the said John F. Hughes and Norman B. Bodinger caused a deed to be executed to the Monument Sanitation District conveying title to the said described property. At the time of said conveyance and at all time subsequent thereto Pine Hills, Inc. intended that the Monument Sanitation District be the owner of the fee simple title to said property, to be used as an oxidation pond or lagoon, in connection with the operation of the sewer system of the Monument Sanitation District, its successors and assigns.

4. Subsequent to the execution of said deed, the said Norman B. Bodinger as Chairman of the Monument Sanitation District, caused to be examined the Abstract of Title to Lot 3, in Block 2, Pine Hills Addition No. 4, and was told that a deed conveying this property from John F. Hughes and Norman B. Bodinger to Pine Hills, Inc. would be required. Subsequent thereto the said Norman B. Bodinger and John F. Hughes caused to be executed a Quit Claim Deed dated January 25, 1965 and recorded October 26, 1965 conveying the property from themselves to Pine Hills, Inc. At all times, the said John F. Hughes and Norman B. Bodinger, as the sole stockholders

and as officers and directors of Pine Hills, Inc., caused such deed to be executed so that the title to the property would stand in the name of the Monument Sanitation District.

5. That the said Pine Hill, Inc. executed a deed, purporting to convey the said land to the Monument Sanitation District, knowing full well that title did not stand in the name of the corporation at the time of the conveyance, and is therefore estopped to claim any right, title or interest in said land in opposition to said deed.

6. That the said Pine Hills, Inc., made the conveyance to the Monument Sanitation District by deed dated August 18, 1964 intending to and purporting to convey fee simple title to said property and that the said instrument, attached to Plaintiff's Complaint as Exhibit "A" should be reformed in such respects as necessary to convey fee simple title to the Monument Sanitation District.

7. That on or about October 29, 1971, Pine Hills, Inc. filed its Complaint in this court, alleging breach of the covenant of use contained in the instrument executed August 18, 1964 and alleging that the installation of an aeration system in said lagoon, caused the said lagoon to cease to be an oxidation pond or lagoon and caused the same to be an aeration system stabilization pond.

8. That any recovery on the Plaintiff's First Claim for Relief in Plaintiff's Complaint, is dependant entirely upon the declaration of rights, status, and the interpretation of the language of said deed and construction by the court of that provision in the deed "so long as the land is used for an oxidation pond, sometimes referred to as a "lagoon", in connection with the operation of the sewer system of the Monument Sanitation District, its successors and assigns".

WHEREFORE the Defendant prays that the deed executed August 18, 1964 and attached to Plaintiff's Complaint as Exhibit "A" be declared as an instrument conveying fee simple title to the Monument Sanitation District to the property described therein, and quieting the title to the same in said District.

That this Court construe and interpret said deed and declare the said land as being used as an oxidation pond sometimes referred to as lagoon despite the installation of certain aeration equipment.

That the use provision in said deed has not been violated.

For costs of this action and for such other and further relief as to the court may seem proper.

Respectfully submitted,

Darrell D. Thomas
Attorney for Defendant
115 East Vermijo Avenue
Colorado Springs, Colorado 80902
636-3301

1403 [illegible]

FILED IN DISTRICT COURT
EL PASO COUNTY, COLO.

AUG 1 1972

FRANCIS J. CUCKOW
CLERK

STATE OF COLORADO, COUNTY OF EL PASO

IN THE DISTRICT COURT

CIVIL ACTION NO. 67269, Division No. 3

PINE HILLS, INC.,)
)
Plaintiff,)
)
vs.) ANSWER AND COUNTERCLAIM
)
THE MONUMENT SANITATION DISTRICT,)
)
Defendant.)

PLAINTIFF, for answer to the counterclaim on file herein, admits, denies and alleges as follows:

1. Admits paragraphs 1 and 2 of said counterclaim.

2. Admits paragraph 3 of said counterclaim except that it denies that it intended to convey a fee simple title to Monument Sanitation District, but affirmatively alleges that it intended to convey the use of the property for the use of an oxidation pond or lagoon as specifically set forth in said deed, and subject to said condition, and that said conveyance was for the operation of the sewer system of The Monument Sanitation District only, and affirmatively alleges that said Sanitation District has used it for the operation of other sewer systems beside that of The Monument Sanitation District.

3. As to paragraph 4 of said counterclaim it admits that an examination of the title of The Monument Sanitation District was made by Monument Sanitation District's attorneys, or attorneys for a bonding company. Admits that Norman B. Bodinger

and John F. Hughes thereafter caused to be executed a Quit-Claim deed dated January 25, 1965, and recorded as stated for the uses and purposes therein set forth, admits that John F. Hughes and Norman B. Bodinger at all times were the sole stockholders and were two of the officers and directors of Pine Hills, Inc., and caused such deed to be executed solely for the uses and purposes set forth in said deed; they deny each and every other allegation in said paragraph contained.

4. Denies paragraph 5 of the counterclaim in its entirety.

5. Denies paragraph 6 in its entirety.

6. Admits paragraph 7 of the counterclaim.

7. Admits that Plaintiff's substantial right rests on the wording of its deed to Monument Sanitation District, the Defendant, and the conditions and restrictions therein contained, and denies each and every other allegation contained in paragraph 8 of said counterclaim.

8. Denies each and every other allegation not specifically above admitted or denied and contained in said counterclaim.

BENNETT, HEINICKE, MORRISON & HOLLAWAY

By John F. Bennett
Attorneys for Plaintiff
231 East Vermijo Avenue
P. O. Box 2168, 80901
Colorado Springs, Colorado 80903
Tel: 634-1556

Address of Plaintiff:

Monument, Colorado

STATE OF COLORADO, COUNTY OF EL PASO

IN THE DISTRICT COURT

CIVIL ACTION NO. 67269 - DIVISION NO. 3

FILED IN DISTRICT COURT
EL PASO COUNTY, COLORADO
JUL 12 1973
FRANCIS J. CUCKOW
CLERK

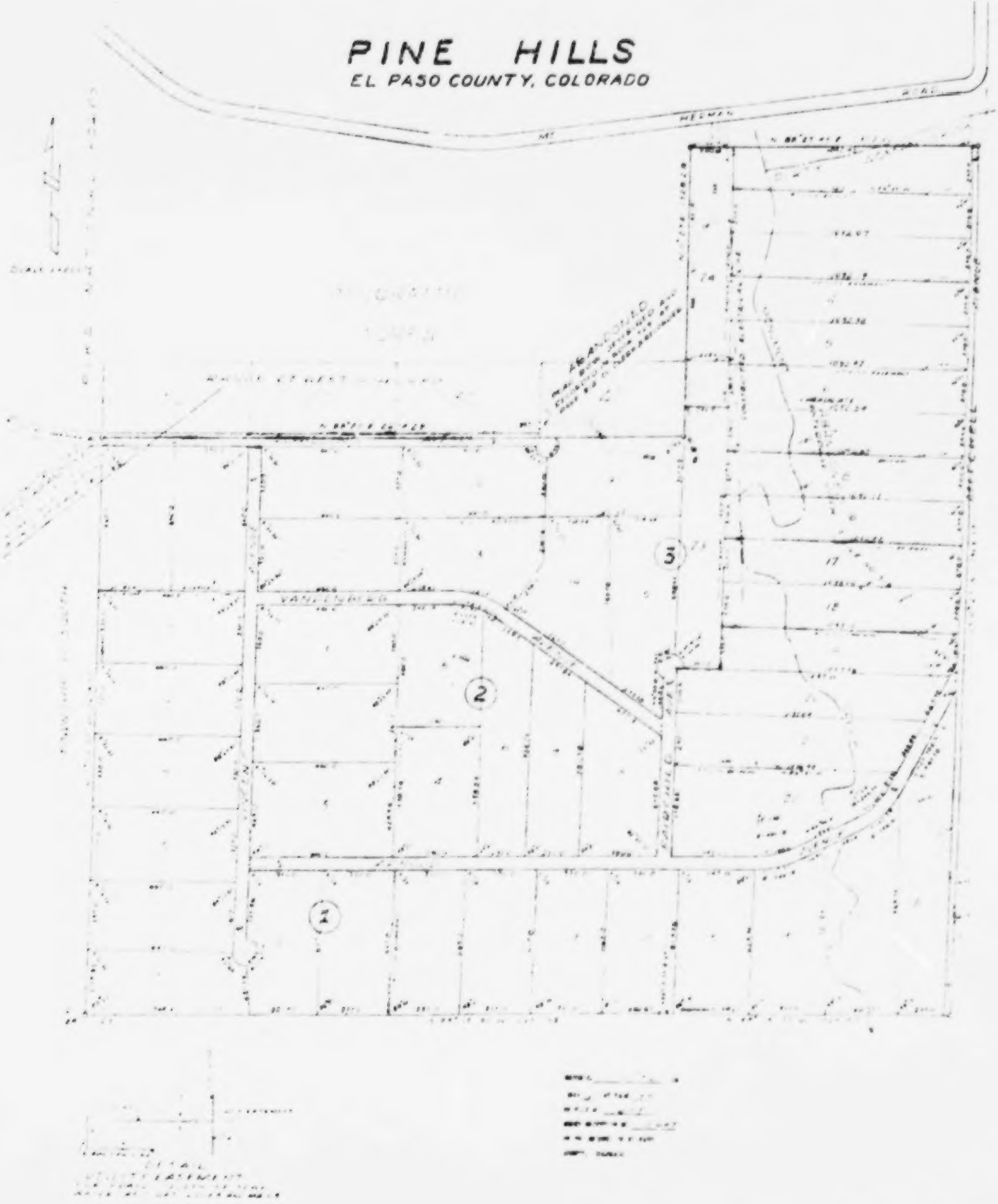
PINE HILLS, INC.,
Plaintiff,
vs.
THE MONUMENT SANITATION DISTRICT,
Defendant.

NOTICE OF LIS PENDENS

All persons are notified that there is pending in the District Court, El Paso County, State of Colorado, Civil Action No. 67269 above captioned, wherein the Plaintiff, Pine Hills, Inc., seeks a decree adjudging it to be the owner of all the right, title and interest acquired by The Monument Sanitation District in and to Lot 3, Block 2, Pine Hills Addition No. 4, El Paso County, Colorado.

BENNETT,HEINICKE,MORRISON&HOLLAWAY

By John F. Bennett
Attorneys for Plaintiff
231 East Vermijo Avenue
P. O. Box 2168
Colorado Springs, Colorado 80901
Tele: 634-1556


PINE HILLS
EL PASO COUNTY, COLORADO
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Page
44

NORMAN B. BODINGER,
JOHN F. HUGHES,

to

PINE HILLS.

INSTRUMENT PLAT AND STATEMENT.
Dated October 10, 1956.
Acknowledged October 10, 1956,
before John F. Bernett, Notary Public
in El Paso County, Colorado. (Seal)
Recorded October 11, 1956.

Norman B. Bodinger and John F. Hughes, being owners in fee simple of the Southwest quarter; the Southwest quarter of the Northeast quarter; the West half of the of the Southeast quarter, all in Section 22, Township 11 South, Range 67 West of the 6th P.M. in El Paso County, Colorado; have caused said land to be surveyed, subdivided and platted into blocks, lots, and streets as shown by that plat attached hereto, which plat is drawn to a fixed scale as indicated thereon and accurately sets forth the boundaries and dimensions of the land and subdivision thereof, which subdivision is to be known as Pine Hills, El Paso County, Colorado; and covenant and agree to lay out, grade and gravel all platted streets and to provide proper drainage for same, all to the satisfaction of the County Commissioners, the said streets and public utility easements indicated hereon are dedicated to public use.

Warren R. Marriage, registered Land Surveyor No. 1752, in the State of Colorado, certifies that the tract shown by the annexed plat and subdivision thereof was surveyed and platted under his supervision and that said annexed plat accurately shows the described tract and subdivision thereof. (Seal)

The subdivision was approved as to drainage and related matters on this 4th day of October, 1956.

Thomas J. Russell,
County Engineer.

The annexed plat was approved by the Planning Commission of El Paso County, Colorado, this 10th day of October, 1956, and the dedication to public use of the streets shown thereon, accepted.

L. C. Dorr,
Chairman.

Notice is hereby given that the purchaser shall be responsible for his own source of water supply.

PROPERTY OWNERS IN "PINE HILLS" WITHIN APPROXIMATELY ONE-HALF MILE OF SITE 1

Block	Lot		Deed Rec'd	Date Bldg. Permit
PINE HILLS				
1	3	George R. and Maureen A. Price	3/27/72	
1	9	Robert A and Nancy G. McClelland	8/13/73	
1	10	Harold A. and Margaret Myers	4/12/57	
1	11	John P. and Virginia P. Healy	4/17/57	
1	12	Donald W. Lorraine C. Camp	1/25/62	
1	13	John E. and Eva Lucas	4/16/58	
1	14(except E 60')	Michael and Linda Adams	12/11/72	
1	15	Marion D. and Elizabeth Tellquist	9/ 4/73	
1	16	Bodinger and Hughes		
1	E 60' of 14	Bodinger and Hughes	3/11/58	
2	1	Gary and Ann Reyschneider	11/27/72	
2	2	Gary D. Reyschneider	8/22/73	
2	3	James Chas. and Margaret Ellidge	4/18/73	
2	4	Edward R. and Maxine Neff, Jr.	6/13/57	
2	5	A. S. Dudley and A. F. Erickson	5/13/57	
2	6	James C. and Wilma R. Satterwhite	10/31/72	6/25/73
2	7	Albert A. and Vera E. Rainous	5/20/57	
2	8	John and Lynn H. Schiever	4/24/73	5/11/71
3	7	Perry and Florence Griffith	9/21/66	
3	8	Lyle and Annabel Knudsen	11/ 9/66	
3	9	Gary A. and Marilyn M. Marsac	11/ 3/72	
3	10	Gary A. and Marilyn M. Marsac	11/ 3/72	
3	12	Gary E. and Nancy T. Chase	10/ 7/71	U.C.
3	13	Travis M. and Francis Scott	4/19/57	
3	14	Gary A. and Marilyn M. Marsac	11/ 3/72	
3	15	Hugh A. and Janet Baker Parker	4/19/57	
3	16	Carolyn S. Wheat	10/30/72	12/19/72
3	17	Alvin E. and Esther L. Ange	1/ 8/71	
3	18	Benjamin and Judy L. Gilbert	12/22/72	
3	19	Robert Eric and Garie Ann Allen	8/17/72	
3	20	Quentin J. and Geraldine R. Goss	10/13/66	
3	21	Henry C. and Burma D. Howard	10/13/66	
3	22	Matyas I. and Virginia Koos	10/30/67	

Received at 11 o'clock A. M.,

Reception No. 36284 HARRIET BEALS BOOK 2029 PAGE 956

DEED

KNOW ALL MEN BY THESE PRESENTS, that PINE HILLS, INC., a Colorado corporation, for the consideration of TEN DOLLARS ($10.00) and other good and valuable considerations in hand paid, hereby sells and quitclaims to THE MONUMENT SANITATION DISTRICT, a sanitation district formed in Civil Action No. 43351 in the District Court of El Paso County, Colorado, its successors and assigns, the following real property, situate in the County of El Paso and State of Colorado, to-wit:

Lot 3 in Block 2, Pine Hills Addition No. 4,

so long as the land is used for an oxidation pond, sometimes referred to as a "lagoon", in connection with the operation of the sewer system of the said MONUMENT SANITATION DISTRICT, its successors and assigns,

> RESERVING, HOWEVER, to the Grantor, any and all water rights which may accrue or develop from the operation of the said oxidation pond,

with all the appurtenances thereto.

DATED this 18th day of August, 1964, at Colorado Springs, Colorado.

(Corporate Seal)

ATTEST:

Norman B. Bodinger

Norman B. Bodinger, Secretary

PINE HILLS, INC.

By ______________________

John F. Hughes, President

STATE OF COLORADO)
ss.
County of El Paso)

On this 18th day of August, 1964, the within and foregoing instrument was acknowledged before me by JOHN F. HUGHES, President, and NORMAN B. BODINGER, Secretary of PINE HILLS, INC.

WITNESS my hand and official seal.
My commission expires ______________________

____
Notary Public

Block	Lot	Record Owners	Deed Rec'd	Date of Bldg. Permit
PINE HILLS NO. 4				
1	1	Wilma A. and Dorothy W. Larsen	8/12/68	
1	2	Thomas S. and Ethel S. Ryan	1/20/69	
1	3	Max M. and Helen M. Ling	7/10/69	
1	4	Robert A. and Nancy McClelland	11/11/71	U.C.
1	5	Gary Lee and Deborah Ann McDonald	6/15/73	U.C.
1	6	Kenneth and Mary E. Hill	11/ 7/67	
1	7	Norman B. and Cleo Bodinger	9/ 9/71	
1	8	John F. and Wanda R. Hughes	9/ 9/71	
1	9	John R. and Ann E. Geyer	12/ 7/67	
1	10	Robert L. and Marie J. Ranen	8/19/70	
1	11	Leonard F. and Elaine O. Vik	3/22/71	
2	1	Bodinger and Hughes		
2	2	Bodinger and Hughes		
2	3	Monument Sanitation District Bodinger and Hughes)	10/26/65	
		Pine Hills)	8/19/64	
2	4	Bodinger and Hughes		
2	5	Bodinger and Hughes		
3	5	Pine Hills, Inc.	1/ 6/72	
3	6	Chas. W. and Lorrie Lenfest (deed dated 12/8/57)	6/ 9/70	10/ 1/70
3	7	Orville C. and Jessie D. Tangen	10/17/67	
3	8	Irvin C. and S. Margaret Steiner	10/14/69	
3	9	Malcolm V. and Catherine A. Perry	4/30/71	
3	10	Bodinger and Hughes - Pine Hills	12/29/61	
3	11	Bodinger and Hughes - Pine Hills	12/29/61	
3	12	Robert Lewis Bliss	10/19/67	
3	13	Carl S. and Ruth P. Hancock	6/14/68	
4	1	James W. and Rita L. Tucker	11/22/67	
4	2	Elmer P. and Geraldine P. Loon	10/17/67	
4	3	Pine Hills	12/29/61	
4	4	Irl L. Mabay	3/21/68	
4	5	Irl L. Mabay	3/21/68	
4	6	Michael C. and Joan L. Horgan	6/16/69	
4	7	Mary L and Herbert L. Horne	3/26/73	
5	1	Pine Hills w/agreement to purchase	11/17/58	

RESPONSE TO DARRELL D. THOMAS

1. The record shows that the residents of the three communities overwhelmingly support use of Site 1 as the site for the proposed waste treatment facility. The record also shows that objectors to Site I were few in number (when compared to supporters of Site I). The record also shows that in addition to Norman Bodinger, protests against use of Site I were made by (1) Charles Lenfest, representing 43 landowners within one-half mile of Site I; Hap Steiner; and Robert Allen. The Pine Hills area is zoned A-4, and A-5, each of which requires minimum lot size of 5 acres. In our judgment, the economics of serving 5 acre tracts owned by Messrs. Bodinger and Hughes, and Pine Hills, Inc. between Sites 1 and 2 would prove infeasible should Site 2 be used.
2. See response to NHPQ regarding costs of going to Site 2.

The photographs submitted have been considered in EPA's evaluation in the final statement.

3. The hearing established that the civil action, Pine Hills, Inc. vs. Monument Sanitation District has not been pressed by Pine Hills, Inc., Mr. Bodinger or Mr. Hughes. The letter dated February 26, 1973 from Mr. Bennett to Mr. Thomas states that under certain conditions, the existing site would be satisfactory with Pine Hills. A condition stated in Mr. Bennett's letter is that "all treatment facilities shall be housed in a building or buildings which create a residential appearance." The design of the proposed facility is clearly in conflict with this condition. There is also doubt as to whether the districts can confirm water rights to all water passing through the plant.

4. No definite evidence was offered by objectors to Site I that property values would decline on location of the facility at Site I. In all fairness it should be pointed out that the Sanitation Districts offered no supporting evidence that property values would not decline. The proposed project will be required to have landscaping, noise mitigation measures if necessary, and operation by trained personnel to assure minimal odor problems.

5. Mr. Johnson's remarks have been noted.

6. The hearing did not establish that Mr. Heiner was one of many purchasers of property based on misrepresentations by Messrs. Bodinger and Hughes. According to Mr. Steiner, when he purchased his property, it was with the expectation of having a lake and recreation area at the site of the Monument lagoon. Discussions with Charles Lenfest over the past two years indicate that he also expected a lake and recreation area at the site of the Monument lagoon.

The hearing record and correspondence received by EPA from Mr. Bodinger in May, 1973 both reflect that he was instrumental in having the Monument lagoon located at the current site (Site I). It is also clear that the establishment of the lagoon was after the vast majority of land purchases in Pine Hills, but unclear as to what representations were made regarding the property at the time of sale. The record seems fairly clear that purchasers made no claim against the Monument Sanitation District because of the existing lagoon from the time of its establishment until the current controversy arose.

7A. Testimony of Mr. Owens at the public hearing indicated that condemnation procedures would be required to obtain Site 2. It is assumed that legal action would also be required to obtain right of entry to conduct soil investigations.

B. The stated position of the Monument Sanitation District to withdraw from the existing treatment agreement is acknowledged.

C. Establishment of a buffer zone, based on testimony at the hearing, appears to be at least an improbability.

D. The assumption is made that the reference is to Roland Gow of the staff of the Pikes Peak Area Council of Governments. Mr. Gow's comments and those submitted by Mr. Mechan, Executive Director of the Council, indicate that should Site 2 be selected, a new A-95 review would be required, also site approval by the State Health Department, etc., but not that approval would be denied. Our interpretation of the record is that having proceeded this far with planning for the facility at Site I, it is doubtful that approval of Site 2 could be obtained.

8. The hearing did not establish that the mill levy of the Palmer Lake Sanitation District would have to be increased to 26 mills because of the delay caused by the law suit filed against EPA by Pine Hills, Inc. It was established that without revenues, the mill levy would have to be increased from 10 mills to 26 mills to meet 1975 debt service requirements on the existing debt of $570,000. As it is unknown at this time when the system will go into operation, it is impossible to ascertain with any degree of certainty what the required mill levy will be, but the figure of 26 mills as compared to the present 10 mills dramatically illustrates something of the financial difficulties of the Palmer Lake Sanitation District.

9. Evidence presented at the public hearing and a subsequent field inspection made by EPA and local residents of the area definitely establishes the need for construction of a sewage treatment facility as soon as possible.

10. The record shows that Mr. Lenfest constructed his home with the knowledge of the existing Monument lagoon and also with the knowledge that the three sanitation districts had plans for an expanded joint facility at that location. Having purchased his land under an installment contract in 1957, Mr. Lenfest would have been making payments some 6 or 7 years prior to construction of the existing lagoon. Data submitted by Mr. Stan Johnson, El Paso County Commissioner, at the hearing shows that Mr. Lenfest's deed was recorded in June 1970 and his house constructed in 1971. Therefore, it appears that at the time of construction of the lagoon Mr. Lenfest was about halfway through the contract payment period. As was suggested by some of the testimony at the hearing, the

purchasers had the option of continuing or stopping contract payments at any time. However, we submit that this is a deceptively simple answer or solution, especially if one has been paying on a contract for a number of years.

The comment that a tentative conclusion that Site 2 should be utilized was first arrived at, and thereafter the statement set about to justify the location is unwarranted. The draft statement recognized merit in Site 2, but also fully recognized that problems existed with the site which would have to be resolved before it could be used. Ideally, information would have been available during preparation of the draft to make a definitive recommendation, however, this was not the case.

STATE OF COLORADO

JOHN D. VANDERHOOF
Governor

JOHN W. ROLD
Director

COLORADO GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES
254 COLUMBINE BUILDING – 1845 SHERMAN STREET
DENVER, COLORADO 80203 PHONE 892-2611

August 19, 1974

Mr. William Geise, Chief
Environmental Evaluations Branch
Air and Water Programs Division
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Geise: RE: DRAFT ENVIRONMENTAL STATEMENT-PALMER LAKE SANITATION DISTRICT

We have reviewed the draft environmental statement, and cite the following important geologically oriented considerations:

1) Monument Creek has a long history of flooding, often with severe results. Any open sewage lagoons, such as that proposed, should be placed well above the flood plain.

2) Downstream water wells should be assured protection from pollution by surface recharge from treated sewage effluent.

3) The alluvium and Dawson Arkose aquifers both have a high potential for surface pollution in this area. Both units contain areas of very permeable materials, which will readily absorb any sewage effluent discharged upon them. This is particularly critical in areas where untreated, or partially treated, sewage will be present such as at the open sewage lagoons. Extreme caution should be taken to safeguard these aquifers, and avoid contamination.

We appreciate this opportunity to comment on the proposed Palmer Lake Sanitation District. If we can be of further help, please do not hesitate to contact us.

Very truly yours,

Doyle L. Scroggs
Engineering Geologist

Reviewed by:

L. R. Ladwig
Associate Engineering Geologist

DLS/je

GEOLOGY
STORY OF THE PAST . . . KEY TO THE FUTURE

RESPONSE TO COLORADO GEOLOGICAL SURVEY

1. The flooding history of Monument Creek is acknowledged, also that at times severe floods have occurred. The proposed new lagoons are located in the flood plain and are designed to withstand a flood of 20,000 cfs. Consultations with the Albuquerque Corps of Engineers' District established that flow as being a reasonable one for which to design flood protection.

2, 3. The chlorinated effluent discharged from the polishing lagoon should be of a high enough quality such that the groundwater resource will not be affected.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 17107, Denver, Colorado 80217

RECEIVED
AUG 20 1974
OFFICE OF REGIONAL
ADMINISTRATOR

August 19, 1974

Mr. John A. Green, Regional Administrator
Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

We have reviewed the draft environmental statement, Palmer Lake Sanitation District, Palmer Lake, Colorado, Project No. C 080306.

On page 88, item 13 should be "Don Nielsen; U. S. Soil Conservation Service, Colorado Springs."

We do not have any project which would be affected by this proposal.

We appreciate the opportunity to review and comment on this draft statement.

Sincerely,

M. D. Burdick
State Conservationist

cc: Council on Environmental Quality (5 copies)
Administrator, SCS; Washington, D.C.
USDA Coordinator of Environmental Activities

Response to the Soil Conservation Service

None Required

AUG 20 1974
ICE OF REGIONAL
ADMINISTRATOR

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Bldg. 85, Denver Federal Center
Denver, Colorado 80225

8420
August 19, 1974

Mr. John A. Green
Regional Administrator
United States Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

Thank you for the opportunity to review the Draft Environmental Statement for Palmer Lake Sanitation District, Project No. C 080306.

Apparently there will be a large number of septic tank systems remaining in the vicinity of the proposed project. Shouldn't the proposed facility be designed to receive and treat pumped wastes from such sources?

Sincerely,

for W. J. LUCAS
Regional Forester

Response to the Forest Service

The Pine Hills area to the north and west of the site has minimum lot sizes of 5 acres which economically precludes a collection system tied with the proposed facility.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL BUILDING, 19TH AND STOUT STREETS
DENVER, COLORADO 80202

REGION VIII

RECEIVED
AUG 22 1974
OFFICE OF REGIONAL ADMINISTRATOR

August 21, 1974

IN REPLY REFER TO
8M

Mr. John A. Green
Regional Administrator, Region VIII
Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

This is in response to your request for our comment on the Draft Environmental Impact Statement for Palmer Lake Sanitation District, Palmer Lake, Colorado.

As you know, the Department of Housing and Urban Development is primarily concerned with (1) the compatibility of the action with the comprehensive planning for the area and (2) the effects of a proposed action on urban and residential areas. In assessing these considerations, this office has the following comments:

> Both Palmer Lake and the unincorporated portions of El Paso County have been identified as flood hazard areas and are eligible for flood insurance under the Emergency Flood Insurance Program. An assessment and delineation of flood hazard areas should be addressed in accordance with Executive Order 11296 to indicate the relationship of the proposed project to the flood hazard areas.
>
> The excessive noise level which would impact neighboring residences of either alternative represents an area of concern to this office. We recommend that specific means for mitigating the noise levels be studied and discussed in the statement.

We appreciate this opportunity to provide our comments pertaining to the Palmer Lake project. If you have any questions regarding these remarks, or if we may be of further assistance, please contact this office.

Sincerely,

Robert C. Rosenheim
Regional Administrator

Response to the Department of Housing and Urban Development

The discussion on flood hazard has been expanded in the final statement.

The noise levels as presented in the draft were the estimated unmuffed levels from the aeration blower. The project as constructed will have sufficient noise mitigation measures to bring the noise levels within those established by the State of Colorado for residential areas.

Colorado
Division of Planning

John D. Vanderhoof / Governor

1575 Sherman Street / Denver, Colorado / 80203

Philip H. Schmuck / Director

Department of Local Affairs

Phone / (303) 892-2178

August 21, 1974

Mr. John A. Green, Administrator
Environmental Protection Agency, Region VIII
1860 Lincoln Street
Denver, Colorado 80203

SUBJECT: Draft Environmental Statement,
Palmer Lake Sanitation District

Dear Mr. Green:

The Colorado State Clearinghouse has reviewed the above-referenced draft environmental statement. The DES provides an adequate assessment of the proposed project, and the Clearinghouse has no objections to the DES as long as substantial conformance with local and regional land use plans and policies is maintained and all regulations concerning air and water quality are met.

Thank you for providing us the opportunity to review and comment upon the DES.

Sincerely,

Kenneth [illegible]
for

Philip H. Schmuck
Director

PHS/JO/vt

cc: John Bermingham, Assistant to the Governor on Environmental Affairs and State Planning
J. D. Arehart, Executive Director, Department of Local Affairs
Gil McNeish, Director, Land Use Commission
Frank J. Rozich, Director, Water Quality Control Division
Lane Kirkpatrick, Acting Director, Air Pollution Control Division
Mike Meehan, Executive Director, Pikes Peak Area Council of Governm

RESPONSE TO THE COLORADO DIVISION OF PLANNING

The project as proposed for construction in the final statement is in accordance with all local and regional land use plans and policies and will meet applicable regulations concerning air and water quality.

11 Aug 1974
Box 185
Palmer Lake
Co 80133

Office of the Regional Counsel
U.S. Environmental Protection Agency
Suite 900
1860 Lincoln St
Denver, Colo 80203

RECEIVED
AUG 19 1974
OFFICE OF REGIONAL COUNSEL

Mr Green:

I want the following information entered into the EPA record of your hearings concerning the Palmer Lake sewage system.

a. The EPA personnel conducting the required hearing were rude and impolite to the people attending the hearing, shouting at them to "...sit down and shut up...." In my mind, most of the situations in which the EPA personnel were rude to the audience could have been prevented, had the EPA completely and capably explained the format of the hearing. As an example of the EPA's mismanaging of the hearing was registration cards which were issued and collected before their total impact was explained, ie the meaning of the line on the card which read "I wish to make a statement." In addion, and continuing the example of the EPA's unpreparedness had to use a plain sheet of paper to register, because the EPA ran out of the ~~registration~~ registration cards, other people just gave up and didn't register.

b. EPA personnel claimed to be "... very capable ... and ... well qualified ..." to handle the hearing and its technical details. I disagree, time and again, it was obvious that the EPA personnel had not thoroughly read the draft environmental impact statement — the very document over which the hearing was being conducted. EPA personnel had not done their homework, they failed to know such basic facts as from which direction the wind blows and when individuals were giving testimony in direct conflict with their previous statements in the impact statement. "...Very capable ..." people do their homework.

c. In addiion, a good deal of contempt and disinterest on the part of the EPA was apparent at the final hearing, when one member of the panel was absent without explaination.

d. Frankly, I found the EPA's performance in this hearing less than satisfactory and question that their salary should come out of tax dollars that I provide.

In addition. I want the following entered into the EPA record regarding the Palmer Lake sewage system.

a. A great deal of emphasis has been placed upon what I term the "deer and antelope" aspect of the environmental impact, ie wildlife. habitat disturbance etc. I find that this aspect of the environmental impact is in a very practical sense minimal and that the real environmental impact is on the human residents of Palmer Lake. whenever property taxes increase by 140 per cent, the quality of life is impacted, and this is especially true for a large number of Palmer Lake residents who are on fixed incomes. Such a tax increase is a true "environmental impact on the human beings it is forced upon. Since any prolongation of the sewer system problem will be directly reflected in additional tax increases for Palmer Lake. I therefore request that, "the EPA get this show on the road and thereby minimize the environmental impact on the human beings in Palmer Lake."

b. The individuals protesting the location of the sewage facility have placed a great deal of emphasis on olfactory and visual polution. Now it is firmly in my mind that the Palmer Lake Sanitation District has attempted to follow every state and federal rule, regulation, and request to the best of its ability and to be, essentially, completely legal. Therefore, in addressing the visual complaint, I state that the Palmer Lake Sanitation District has committed itself to a land scaping effort, and I see no reason that it can not be accomplished, I ask that you remember that the EPA implied that the dumping at the current site could not be cleaned up, yet it was thru the Sanitation District's effort, they can and will do a complete and thorough job. In addressing the "smell" complaint, we are intending to install a completely legal sewage system, if this system does not work properly, then I think one should retroactively change the laws under which it was built and upgrade the facility to proper standards. But, I do not understand olfactory environmental polution judgements on a system not yet built.

In summation I want to say that you should not persecute the Palmer Lake Sanitation District through additional hearings and further delay. Our environment has been greatly impacted, and your actions should be to assure that any further impact is minimized.

I have sent a copy of this letter to Senator F. Haskell and Senator P. Dominick to assure myself that the statements reguarding EPA performance are not overlooked.

Sincerely

Howard Warriner

RESPONSE TO HOWARD WARRINER

The comments below are offered in response to Mr. Warriner's remarks regarding the Palmer Lake sewage system.

The "deer and antelope" aspect of environmental impact was not emphasized by EPA at the public hearing or in the draft environmental statement. Quoting from the draft statement, "Impacts on the natural and biological environment are not discounted, and are important but these impacts are not the most significant or crucial ones in selecting the project being evaluated in this environmental statement." We generally concur with Mr. Warriner's opinion that these aspects in a practical sense are minimal.

The final statement provides additional information on the financial status of the sanitation districts and the infeasibility of using Site 2.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

RECEIVED
SEP 11 1974
OFFICE OF REGIONAL
ADMINISTRATOR

In Reply Refer To:
EGS
ER-74/882

SEP 9 1974

Dear Mr. Green:

This Department has received and reviewed the draft environmental impact statement for Project No. C 080306, Palmer Lake Sanitation District, Palmer Lake, Colorado. We commend the Environmental Protection Agency for integrating local and regional land-use policies into the evaluation process. Comprehensive land-use planning and coordination between governmental agencies at all levels assures maximum consideration of present and potential resource use. We offer the following comments to further strengthen the subject impact statement.

Background

On the basis of information available to date, and included in the impact statement, no significant adverse impacts related to geologic conditions are anticipated.

With respect to hydrology (p. 9), neither the maps nor the draft statement present the dimensions of the stream bed and adjacent flood plains. Such quantitative information and detailed maps should be included in the final statement for the proposed site and for major alternate sites.

Mention is made on page 10 of the draft statement that limited water-quality data are available from Monument Creek. The U. S. Geological Survey has established monthly water-quality sampling sites on Monument Creek. Monthly samples are collected from both Monument Creek below Monument Lake, just below the community of Monument and above the treatment sites, and from Monument Creek at its mouth, just above Fountain Creek. Sample collection began in October 1972 for Monument Creek at the mouth and June 1973 for Monument Creek below Monument Lake. Data collection includes major chemical constituents and BOD. To date, BOD values in the water from Monument Creek below Monument Lake generally are less than 2 mg/l, and from the lower station the BOD has ranged from 0.9 to 12.6 mg/l. Greater variability is observed in the lower station due to transmountain diversion and urban runoff. These data and others are available in the files of the Water Resources Division District Office, U. S. Geological Survey, Denver, Colorado (U. S. Geol. Survey with State of Colorado, Water resources data for Colorado, 1974, Pt. I, Surface water records /in review/; Livingston, R. K., Bingham, D. L., and Klein, J. M., 1974, Appraisal of water resources of northwestern El Paso County, Colorado, 1973: Colo. Water Resources Circ. No. 22 /in review/).

It is stated on page 10 that "during dry periods, streamflow at treatment sites considered could be less than treatment plant discharge." A projected 1980 discharge from the plant of 0.9 mgd (1.4 cfs) (p. 45, 63 of Appendix A) will, in the late summer and fall, equal or exceed the discharge of the stream. Recent seepage investigations indicated the stream discharge has varied seasonally from about 36 cfs in the spring of April 1973, 2.25 cfs in September 1973, and 1.2 cfs in October 1973. Thus, Monument Creek may not be able to assimilate the effluent from the sewage treatment plant. With reference to the land-use policy of the Pikes Peak Area Council of Governments and El Paso County (p. 13) encouraging recreation use of the Monument Creek flood plain, the draft statement does not provide sufficient information for an adequate consideration of this land use in conjunction with the proposed action.

The reference in Appendix A (p. 74, paragraph 3) to use of the Monument Creek corridor "to connect local parks with the National Forest; provide footpaths, bridle paths, and bikeways; and serve as a buffer zone in developing urban areas," and any other specific details concerning land to be acquired and developed for recreation use should be consolidated in the section on land-use (p. 11-17 of the draft statement). Such basic information would be helpful in evaluating the effects of the proposal on various existing and potential recreation values.

Project Alternatives

The statement indicates (p. 21, Service Area 2) that selection of Service Area 2 would be inconsistent with land-use policies for the area, a judgment based on the possible secondary impact of development encouraged by close proximity of the sewage treatment plant. However, the development of the proposed facilities anywhere along the open-space corridor may be directly at odds with the city's land-use policies (p. 13) which call for avoidance of flood plains and the development of recreation use along Monument Creek. The land-use maps provided are not of sufficient detail to allow determination of the validity of these conflicts or others which may exist. We suggest the statement address these conflicts directly and provide the detailed land-use information necessary for an adequate evaluation.

On page 29 (section D, "Effluent Disposal") it is stated that "Monument, Beaver, and Hay Creeks are the only streams in the area which flow most of the year." However, it has been found that Monument Creek, in the reaches in question, is a losing stream during a portion of the year. Small gains of 0.3 to 0.4 cfs were detected in the fall months, while losses of 0.8 to 3.7 cfs were detected during spring and early summer (see refs., above: Livingston and others, 1974; Water Resources Data for Colorado, 1974).

The statement recognizes (p. 29) that "effluent discharge above Monument Lake from Site 4 is undesirable because of the use of the lake for recreation purposes." We note that all but one of the alternatives which the draft considers are part of the proposed open-space corridor along Monument Creek dedicated to recreation use. We suggest that the statement make an evaluation of other sites which would not require the use of park land.

Environmental Impacts of Alternative A and Alternative B

More details are desirable in discussing the flooding potential at the two alternative sites. Also, the 800-foot channel change associated with the Site 1 proposal should be more thoroughly described and its effects on fish, wildlife, recreation, and water quality quantified. The impact of the treatment plant on recreation values at both sites should be considered, preferably with reference to specific plans.

The long-term impacts and temporary adverse effects which would occur on those occasions when the treatment plant discharge is greater than the stream flow (as indicated on p. 10) should be described. An estimate of how often this situation could occur would be helpful in assessing any long-term effects.

This section of the impact statement and page 24 of the appended environmental impact assessment contain Colorado wastewater effluent parameters, among them fecal coliform limitations for class B_3 waters and other than B_3 waters of 500/100 ml and 5000/100 ml, respectively. Also included is a dissolved oxygen minimum requirement of 2.0 mg/l. These parameters are from the Colorado Department of Health, "Standards for the Discharge of Wastes," effective January 15, 1973, which have not been revised to date.

It is realized that the environmental assessment and draft statement were in preparation while the Colorado water-quality standards were in a state of flux. However, the Colorado "Water Quality Standards and Stream Classification," effective June 19, 1974, contains new classifications and standards:

(1) There is no B_3 classification. Monument Creek as a tributary of Fountain Creek is classified B_1.

(2) For class B_1 water, "Bacteriological concentrations do not exceed a geometric mean of 10,000 total coliform groups or 1,000 fecal coliform groups per 100 milliliters based on a minimum of not less than five samples obtained during separate 24-hour periods for any 30-day period, nor do 10 percent of the fecal coliform samples exceed 2,000 groups per 100 milliliters during any 30-day period."

(3) For class B_1 water, "The dissolved oxygen concentration is not less than 6 milligrams per liter."

Presumably, the B_1 criteria apply also to effluents into Monument Creek, although this may depend on quantity and quality of flows in the creek.

With reference to the section on "Historic Places" (p. 51), no established or studied units of the National Park System appear to be adversely affected by the proposal. The proposal also does not appear to adversely affect any site registered as a National Historic, Natural, or Environmental Education Landmark, or any site listed as eligible for such registration.

The statement indicates consultation with the National Register of Historic Places (p. 51). It should also establish that the Federal Register of February 19, 1974, which lists all National Register sites, and all subsequent monthly supplements were consulted. If it is found that a project will have an effect upon a National Register property, the statement should reflect compliance with Section 106 of the National Historic Preservation Act of 1966 (P.L. 89-665) and Executive Order 11593.

The statement should establish that the State Historic Preservation Officer participated in the determination that the project would have no effect upon any historic properties. The best supportive documentation is his letter of comment, which is lacking in the draft statement.

While there may be no known archeological resources in the project area, a definitive statement of intention is needed. It is our understanding from pages 52 and 72 that a professional archeological survey of the entire project area, including interceptors, will be conducted should Site 2 be selected. It may also be necessary to conduct an archeological survey of any expansion lands should Site 1 be chosen. Arrangements to provide for this survey should be detailed in the environmental statement.

The statement should discuss the action proposed to professionally determine the presence or absence of archeological resources in the project area and the effect of the proposal upon any such resources present. The statement should further reflect procedures to be followed should previously unknown archeological resources be encountered during project development. Identification of the survey archeologist, approximate date of the survey, and his documented report would be especially valuable data for inclusion in the final statement.

Unavoidable Adverse Impacts

From the land-use maps in the statement, it appears the treatment plant would take acreage from the open-space corridor. This fact should be recognized as an unavoidable adverse impact and should be discussed in this section. The statement should also identify how many acres will be required for each site, including the existing lagoon at Site 1 and the acreage required for road construction to Site 2.

Mitigating Measures

If Site 2 is selected, comprehensive planning for the recreation use of the Monument Creek open-space corridor could allow the mitigation of some adverse impacts (flood-plain hazards, effluent discharge, proper landscaping to minimize intrusion, etc.) through careful siting of the treatment plant. The proposed dedication of Site 1 to park purposes would be an excellent mitigating measure for the taking of undeveloped land at Site 2 and proper planning would further enhance the value of the new park.

Consideration might be given, in the statement, of the possibility of a grant of matching funds from the Land and Water Conservation Fund for acquisition and development of the Monument Creek corridor for outdoor recreation use. In addition, restoration of the site of the existing lagoon and dedication of the land to outdoor recreation purposes should also be considered in the statement.

We thank you for the opportunity to review and comment on this environmental impact statement and we hope that our comments will assist in the preparation of the final statement.

Sincerely yours,

Deputy Assistant Secretary of the Interior

Mr. John A. Green
Regional Administrator
Region VII
Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

RESPONSE TO THE DEPARTMENT OF THE INTERIOR

Background

Detailed information is not available on the areal extent of the flood plain along Monument Creek, e.g. extent of the 100-year flood. The two additional lagoons are designed for protection against a flood discharge of 20,000 cubic feet per second, which would crest at approximately elevation 6842 adjacent to the facility.

The BOD values stated by USDI for Monument Creek above the treatment site show that water quality as measured by BOD only is generally good. The proposed project may tend to improve water quality near the mouth of Monument Creek to a certain extent. It appears that the effluent discharge would equal or exceed low streamflow in 1980. As necessary, appropriate restrictions would be placed on the effluent discharge permit in order to protect water quality in Monument Creek.

Project Alternatives

Development of the proposed facilities in the open-space area of the Monument Creek floodplain constitutes an adverse impact on use of the floodplain for recreation purposes and has been acknowledged in the final statement. The land use maps provided in the environmental statement are the only ones we have available.

EPA believes that sufficient alternatives have been analyzed in the statement.

Environmental Impacts of Alternative A and Alternative B

More information has been provided in the text of the final statement regarding flooding potential and also in response to several of the comments. No studies have been made at Site 2 (Alternative B) to determine the water surface elevation during passage of the design flood of 20,000 cubic feet per second. Also, no facility layouts have been made at Site 2, as it was not possible to enter the site during the preparation of the environmental assessment. Inspection of the site by use of quadrangle maps and from vantage points in the area, primarily roads, it is concluded that the flood hazard at Site 2 is less than at Site 1 which is totally within the floodplain.

The 800 foot channel change will be detrimental to aquatic life though the present fishery is of rather poor quality. Siltation will occur during the channel change but will be temporary. The facility at either site would require approximately the same area (about 15 acres) which would become unavailable for recreation use. The impact of the facility at either site can probably be considered to be detrimental to recreation values but not to a significant extent considering the relatively small area used for the facility. On occasion there will be an odor from the facility which could prove objectionable to anyone using the area for recreational purposes at that time. However, odor is not expected to be a problem and will not generally be detrimental to recreation values.

If effluent discharge proved to be detrimental to streamflow, the discharge permit issued to the Palmer Lake Sanitation District would be revised to require an effluent consistent with maintenance of stream quality standards.

The discussion on water quality and discharge standards has been revised in the text of the statement.

The text has been revised to reflect that the Federal Register of February 19, 1974 and subsequent monthly supplements were consulted. A letter from the State Historic Preservation Officer has been included in the final statement.

A brief archaeological reconnaissance will be required at Site 1 prior to construction. The area included will be: Monument Creek in the immediate vicinity of the channel change, the 5 acre tract which is the site of the existing lagoon, and the 2 five-acre tracts in which the proposed expansion would occur. Because of the poor financial condition of the Palmer Lake Sanitation District, it will be impossible to include any additional area.

Unavoidable Adverse Impacts

The text of the statement has been revised.

Mitigating Measures

Selection of Site 1 precludes use of the site for park purposes.

304<

ENVIRONMENTAL IMPACT ASSESSMENT

PALMER LAKE SANITATION DISTRICT

Palmer Lake, Colorado

CH2M HILL Engineers and Planners
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I BACKGROUND

PROPOSED ACTION

This project is to be constructed for the Palmer Lake Sanitation District, formed to provide sewerage facilities for the City of Palmer Lake, Colorado. The project consists of an expansion of the existing Monument lagoon in order that it may adequately serve the Palmer Lake Sanitation District as well as its current users, the Monument and Woodmoor Sanitation Districts. The three districts have entered into an agreement for joint use of the proposed facility.

The expanded lagoon will serve an initial population of approximately 2,600 persons; will have an initial capacity of 7,000 persons and is designed for expansion to serve a population of 13,000 to 14,000. The new lagoons are to be constructed ahead of the existing lagoon, with the existing lagoon to be converted for polishing. Total lagoon areas will be 7 acres. Interceptors consisting of 12,626 feet of 12-inch pipe and 8,857 feet of 8-inch pipe are now being installed.

The proposed lagoon project is on Monument Creek approximately 2 miles below the district boundary and 1.25 miles below Monument Lake. Figures, 2, 4, and 5 indicate the location of the plant, areas to be served, and major sewerlines.

The project is necessary because of the gradual failure of the septic tank drain fields and cesspools utilized through the years in the City of Palmer Lake. In addition to elimination of septic tank problems, the project will overcome the deficiencies of the existing Monument lagoon. Because the lagoon is overloaded, a cease and desist order was issued on the lagoon by the Colorado Health Department, effective 1 December 1972.

The total project is estimated to cost $540,700 including engineering and administrative costs. Of this amount, $525,700 is eligible for participation under the Federal Water Pollution Control Act, amendments of 1972. A grant of $394,275 will be provided by the U.S. Environmental Protection Agency, which is 75% of the eligible cost. The remaining cost of the project will be borne by the Palmer Lake Sanitation District.

HISTORY OF THE PROJECT

Major events which have occurred during development of this project are:

DATE	
1963	Monument lagoon constructed.
1965	Monument lagoon washed out by flood.
1965	Woodmoor project initiated.
1969	Efforts begin in Palmer Lake to develop sewerage system.
Oct. 1969	PPACG prepares "Monument, Palmer Lake, Woodmoor, Water-Sewer Facilities Plan, 1970-1990."
Dec. 1969	PPACG prepares "Regional Sewerage Plan, 1970-1990," Showing Existing Monument lagoon to be maintained and enlarged for joint use.
May 1970	PPACG issues "Pikes Peak Regional Land Use Plan, 1990," calling for development of areawide sewerage facilities for Palmer Lake, Monument, and Woodmoor.

1970	Suit filed by original owner of Monument lagoon site to have lagoon terminated and land returned.
May 1970 and Dec. 1970	NHPQ Engineers prepare Service Plan for Palmer Lake Sanitation District. Plan explores three alternative sites, estimates cost, and recommends proposed project.
Feb. 1972	Colorado Health Department issues cease and desist order on existing Monument lagoon, effective Dec. 1972.
Feb. 1972	Aeration added to Monument lagoon to improve treatment.
Aug. 1972	PPACG approves "Interim Water Quality Management Plan" showing joint treatment facility at existing Monument lagoon.
Spring 1972 to present	Affected residents and property owners seek to have project removed to another location and file protests on proposed action.
Jan. 1973	EPA files Environmental Impact Appraisal with Negative Declaration.
Feb. 1973	Federal grant offer of $394,275.00 to Palmer Lake Sanitation District. Grant accepted by District.
April 1973	EPA files revised Environmental Impact Appraisal and Negative Declaration.
July 1973	Suit filed to enjoin lagoon project.
Jan. 1974	Court injunction requiring that Environmental Impact Statement be prepared on proposed project.

The Pine Hills and Panoramic Acres developments, of some 200, 5-acre residential lots, lie immediately to the west overlooking the lagoon site. The developer of Pine Hills and residents of this area have objected to the continuation and expansion of the Monument lagoon over the past two and one-half years. Some 10 homeowners and 37 property owners of the Pine Hills area have participated as a group in various efforts to have the proposed project located elsewhere. Four downstream ranch owners have participated with the group although the proposed project would not affect them. B. Gen. Charles W. Lenfest, USAF Ret. who is a local resident and representative of this group, has been consulted in the course of the assessment study. Objections to the project have emphasized its visual intrusion in the natural environment, its odor, and its prominent location at the point where most residents cross Monument Creek to reach their home sites.

Norman B. Bodinger, original developer of Pine Hills, is another objector to the proposed project who has been consulted during this study. While mayor of the town of Monument, Mr. Bodinger was instrumental in the development of the city's first sewerage system. He also provided the land upon which the Monument lagoon was constructed. Title to the site carries conditions relating to the type of sewage treatment allowed. Litigation is now under way in the District Court of El Paso County to establish whether the introduction of lagoon aeration equipment in February 1972 violated these terms.

Mr. Bodinger and his partner in Pine Hills, Inc., John F. Hughes, also brought suit in the U.S. District Court concerning the proposed project. The suit claimed inadequacies in the initial Environmental Assessment and Negative Declaration by the EPA; recognized detrimental environmental effects; necessity for future facility expansions which will be accumulative, and the controversial nature of the project as evidenced by objection of affected property owners. The plaintiffs sought to restrain the EPA from proceeding with the proposed project until an Environmental Statement had been prepared in accordance with applicable Federal regulations and procedures of NEPA. The resulting injunction and requirement of the court that an Environmental Statement be prepared is the basis for this environmental study.

CHARACTER OF THE LOCAL AREA

The area to be served by the proposed system includes the cities of Palmer Lake and Monument and the Woodmoor development. The relationship of these communities to the Denver-Colorado Springs region is shown in Figure 1. The character of each community is described briefly below.

The general area examined in this environmental assessment extends from the north boundary of El Paso County to the Air Force Academy and from the Pike National Forest to the eastern boundary of the Woodmoor Water and Sanitation District. (Figure 2)

The City of Palmer Lake was incorporated in 1889. Early activities included cattle and potato raising, Chautauqua, and resort at Palmer Lake, and railroad facilities. Growth through the years has been modest; adversely effected by a shift in the main highway away from the city, stimulated by development of the Air Force Academy. Since little employment exists locally, most residents are retirees or workers in the Denver or Colorado Springs metropolitan areas including the Academy. Approximately 85% of the employment of local residents is in these areas.

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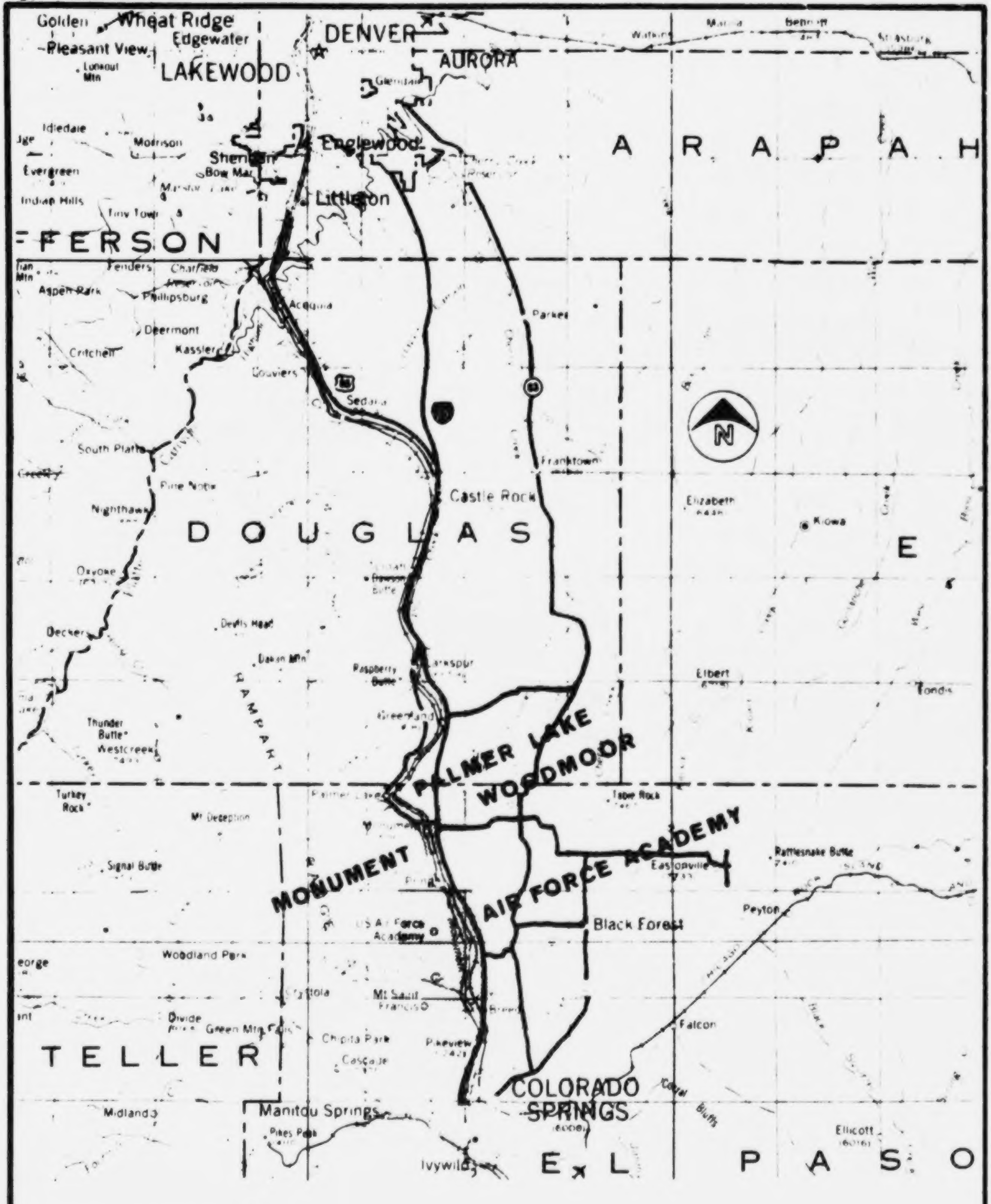
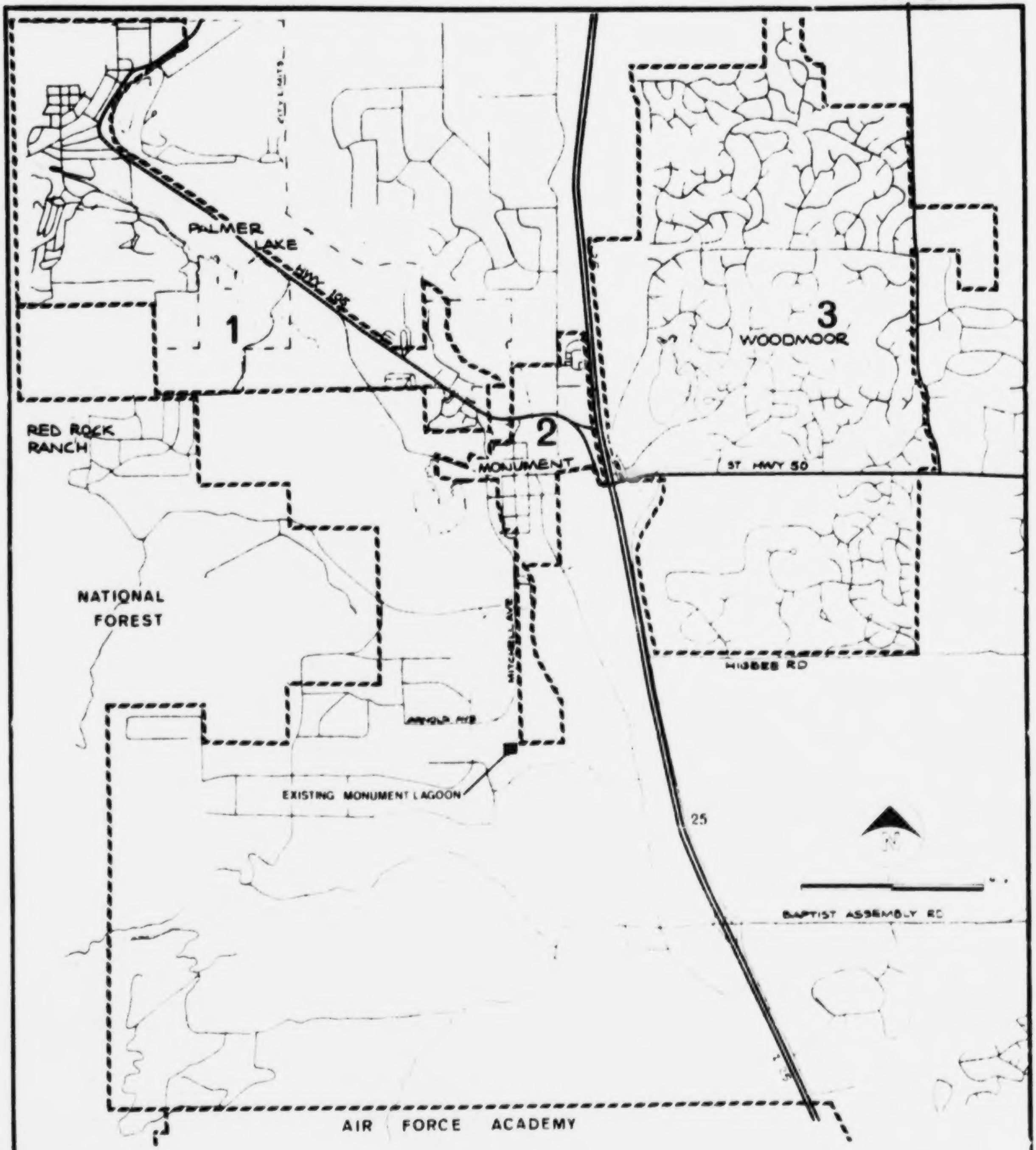

Golden
Wheat Ridge
Edgewater
Pleasant View
DENVER
AURORA
LAKEWOOD
Lookout Mtn
Glendale
Idledale
Morrison
Englewood
Sheridan
Bow Mar
Evergreen
Littleton
Indian Hills
Tiny Town
ARAPAHOE
JEFFERSON
Fenders
Aspen Park
Phillipsburg
Acequia
Parker
Deermont
Critchell
Kassler
Louviers
Sedalia
Franktown
South Platte
Pine Nook
Castle Rock
Elizabeth
Kiowa
Nighthawk
DOUGLAS
Decker
Devils Head
Dakan Mtn
Larkspur
Raspberry Butte
Elbert
Sandis
Greenland
RAMPART
Thunder Butte
Westcreek
PALMER LAKE
WOODMOOR
Palmer Lake
Table Rock
Turkey Rock
Mt Deception
AIR FORCE ACADEMY
Monument
Rattlesnake Butte
Eastonville
MONUMENT
Signal Butte
Peyton
US Air Force Academy
Black Forest
Woodland Park
Crystola
Mt Saint Francis
Divide
Green Mtn Falls
Chipita Park
Falcon
TELLER
Cascade
Pikeview
COLORADO SPRINGS
Midland
Manitou Springs
Pikes Peak
Ellicott
Ivywild
EL PASO
N

FIGURE 1

REGIONAL SETTING


CITY LIMITS
PALMER
LAKE
HWY 105
1
RED ROCK
RANCH
2
MONUMENT
3
WOODMOOR
ST HWY 50
NATIONAL
FOREST
MITCHELL AVE
HIGBEE RD
ARNOLD AVE
EXISTING MONUMENT LAGOON
25
BAPTIST ASSEMBLY RD
AIR FORCE ACADEMY

LEGEND

1 PALMER LAKE SANITATION DISTRICT

2 MONUMENT SANITATION DISTRICT

3 WOODMOOR WATER & SANITATION DISTRICT

FIGURE 2

VICINITY MAP

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The proposed project will provide a sewage collection and disposal system to replace the existing septic tank drain fields and cesspools. Numerous failures in these systems, due to their age and increasing residential densities have caused a recognized health hazard.

The Palmer Lake Sanitation District was established to develop a sewer system for the Palmer Lake area. Boundaries of the districtly differ somewhat from those of the city.

The City of Monument was incorporated in 1879, the first town in Colorado. Until recent years, the city did not experience any significant increase in population. During the past 4 years annexations to the west, north and south have contributed to the city's present population of some 800 persons.

Little employment of an industrial character exists in the city. Commercial concerns in the general vicinity provide some jobs, but employment of most residents is in the Colorado Springs and Denver areas.

The city sewer system was constructed by the Monument Water and Sanitation District whose boundaries coincide with the city limits. Treatment is provided by a lagoon on Monument Creek, which is to be expanded under this project. Septic tanks are not utilized for new development in the city.

The Woodmoor development was initiated some 9 years ago, originally consisting of some 2,000 acres north of Highway 50. The Woodmoor Water and Sanitation District was established to serve the project. Treatment is provided at the existing Monument lagoon.

Most of the 3,000 residential lots within the present district boundaries have been sold, primarily for investment purposes or for retirement. Some 220 homes have been constructed, at an average annual rate of about 37 homes per year from 1968 to 1973. Fifteen homes are currently under construction. Although the district extends from the boundary of El Paso County on the north to Higbee Road on the south, some 3-1/2 miles, most building has occurred within an area extending 2 miles north of Highway 105. (Figure 6)

The project includes a planned industrial area along Highway 25 in which two small firms have located. The area has an advantage for concerns doing business in both Denver and Colorado Springs, although it must compete with other available industrial tracts in these large metropolitan areas.

A major shopping center for the surrounding area, which includes a motel, has been developed north of the freeway interchange.

Outside the Palmer Lake, Monument, and Woodmoor sanitation districts, land is largely vacant. Although much rural land has been platted into lots larger than 2.5 acres in size, the level of development is low and homes are widely scattered. Properties were laid out for use of septic tanks and in most cases it is not expected that they will require public sewerage systems.

Red Rock Ranch, southwest of Palmer Lake, has a water district but no sanitation district, as septic tanks are expected to perform satisfactorily. Monument and Woodmoor share a fire protection district. The Lakeview Heights Water and Sanitation District in Palmer Lake is not functioning.

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LOCAL GEOGRAPHY

The service area lies within northwest El Paso County at the foot of the Rampart Range. The northern boundary extends along a ridge, known locally as Monument Hill, which extends eastward from the range, separating the Platte River drainage on the north from the Arkansas River drainage on the south.

The service area is entirely within the drainage of Monument Creek and its tributaries. Flowing south along the east boundary of the Air Force Academy, the creek joins Fountain Creek at Colorado Springs and the Arkansas River in the vicinity of Pueblo, Colorado.

Elevations range from 6,660 feet on Monument Creek at the Academy boundary to 7,500 feet in the higher portions of Palmer Lake and Woodmoor. Topography is varied, consisting of generally sloping and rolling bench lands extending upward from Monument Creek to the Rampart Range on the west and eastward to the hills of the Black Forest.

Palmer Lake is a natural body of water which discharges by seepage into Monument Creek. Monument Lake is an artificial lake whose surrounding land is owned by the City of Monument and developed for recreation. Thirty-acre Woodmoor Lake is part of the private development.

CLIMATE

Due to unusual conditions at the mountain front and Monument Hill, climatic conditions within the service area are variable and unpredictable, capable of changing considerably over a short period of time. Based upon available records the following will indicate the range of conditions which may be expected.

Normal temperature for the City of Monument prior to 1960 varies from a low of 28.4° F in January to a high of 67.6° F in July, with an annual average of 46.6° F. In January the mean daily temperature ranged from a minumum of 13.8° F to a maximum of 41.7° F and in July from a minimum of 50.7° F to a maximum of 81.2° F. The lowest recorded temperatures were minus 40° F and the highest 100° F. A mean of 15 days per year had temperatures over 90° F, and for 187 days recorded temperatures were less than 32° F. Extended periods with temperatures below freezing or over 100° F are not common.

Rainfall is erratic and limited but somewhat greater than at lower elevations to the north and south. At Monument, normal annual precipitation is 18.55 inches with a low of .50 inches in December and a high of 2.8 inches in May. Except for June, precipitation exceeded 2 inches per month during the period of April through August, averaging less than 1 inch per month from November through February.

Precipitation exceeded 0.10 inches an average of 51 days per year and exceeded 0.50 inches an average of 9 days. Summer rainfall often occurs in short, heavy thundershowers during the afternoon and evening which result in heavy runoff and potential for flooding. In May of 1935, 18 inches of rainfall fell in the headwaters of Monument Creek in a 12 hour period.

Snowfall data for the Academy indicates an average of 66 inches per year with a high of 17 inches in April. Winter snows persists on north facing slopes until spring melting, often creating seeps and boggy places.

Last killing frosts in Colorado Springs occurred on April 27th on the average and first frosts on October 14th. The ground becomes frozen about November 30th. At the Monument Forest Station, the ground freezes to 2 feet but rarely to 4 feet in depth, during an average winter.

Monument Hill is well known to travelers between Denver and Colorado Springs for snow and ice conditions which are more severe than at lower elevations. As elsewhere, stormy periods are often followed by milder sunny weather which removes and prevents significant accumulations of snow.

High winds are occasionally experienced, usually in late spring and early fall. Due to local topography, the direction of local winds are highly variable. At Colorado Springs, prevailing winds are from the north from October to May. During these months the highest wind speeds vary from 21 to 60 miles an hour. In June through September, prevailing winds were from both south and north, with maximum speeds of 55 miles an hour. The annual mean wind speed is 10.4 miles per hour.

Average humidity varies from a low of 35% at mid day in June to from 60 to 70% during the night and mornings most months of the years.

PLANT AND ANIMAL COMMUNITIES(1)

The project study area is near the boundary of the Platte and Arkansas river systems and between the plains and Rocky Mountains. The Monument Creek drainage area therefore has a wide range of plant and animal communities or ecosystems. The communities are somewhat different from foothills areas in the Boulder, Denver, and Fort Collins areas. Vegetational

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(1) Adapted from special ecological study for this Environmental Assessment. See Bibliography, Item No. 3.

differences were noted by the Long Expedition in 1820, when the Colorado state flower, the Colorado Blue Columbine, was first scientifically collected here.

In 1823 James reported the following plant species in the Monument Creek-Colorado Springs region: Black Spruce (Engleman Spruce); Hemlock Spruce (Douglas Fir); Red Maple (Box-Elder); Colorado Blue Columbine; "Birch" (Bog Birch); "Great Shrubby Cactus"; "White-Flowered Caltha" (Marsh Marigold); Common Harebell; Wild Gourd; Horsetail; Common Juniper; Red Cedar; Orchid; Hop Horn Beam; Limber Pine;' Ponderosa Pine, Yellow Pine; Shrubby Cinquefoil; "Cottonwood"; Aspen; One-Sided Wintergreen; "Straggling Oaks" (Gambel Oak); "Willows"; Stonecrop; Prince's Plume; Death Camus.

A preliminary classification of the major communities is:

1. River flood plain shrub communities
2. Dry meadow and mesa grasslands and chaparral
3. Foothills forest and shrub communities

Woody plant cover for these communities is:

1. River flood plain shrubs and trees:

Saliz spp.	40%
Populus sargetii	less than 1%

2. Dry meadow and mesa grasslands and chaparral:

Quercus gambellii	15%
Pinus ponderosa	3%
Pseudostuga menziesii	less than 1%

3. Foothills forest and shrub communities:

Pinus ponderosa	30%	
Pseudotsuga mensiesii	5%	
Juniperous virginiana	1%	
Juniperous communis	less than 1%	
Quercus gambellii	25%	
Cercocarpus montanus	5%	(very dry slopes)

River and Flood Plain Communities:

Soils in this area are easily eroded and occasional summer thunderstorms result in sudden, severe flooding. These factors are important in controlling the shrub community of the river bottoms. These are willows with occasional cottonwood trees scattered among them. Instability in the flood plain is worsened by human disturbance of vegetation along streams and in the surrounding hills. River bed changes and siltation during floods do not enhance plant community development. An excellent example is Dirty Woman Creek, whose bed is heavily silted, probably as a result of development at Woodmoor.

Dry Meadow and Mesa Grasslands and Chaparral:

In the well drained areas above Monument Creek are two distinct communities; shortgrass prairie and oak chapparal. No recent studies exist, but in 1906, immediately east of the Garden of the Gods on the shortgrass mesa, a most important species were grama grasses (Bouteloua spp.). Locally these meadows occur principally between Monument Creek and the mesas, and on the mesas north of Hay and Beaver Creeks.

Gambell's oak (chaparral) dominates the sides of the mesas and gently sloping areas, forming thickets up to three meters high. Occasional Ponderosa pine and Douglas fir are found within the thickets. The oak thickets provide spring forage for herbivores such as mule deer. They also stabilize soil well and should be protected wherever possible.

Foothills Forest and Shrub Communities:

Two relatively distinct forested areas exist which are undergoing a slow ecological transition: 1) Ponderosa pine forest and oak chaparral on the mesas east of Mount Herman, and 2) the coniferous forest and shrub on the slopes of Mount Herman and Raspberry Mountain. The first area contains stands of Ponderosa pine between 100 and 150 years old, and Gambell's oak quite similar in structure to other mesa areas. Most of the pine stands intergrade with the oak and have relict oaks within them.

The mountain slopes support:

- Ponderosa pine (*Pinus ponderosa* Laws.)
- Douglas fir (*Pseudotsuga menziesii* Franco)
- Juniper, red cedar (*Juniperus virginiana* L.)
- Common juniper (*Juniperus communis* L.)
- Gambell's oak (*Quercus gambellii* Nutt.)
- Mountain mahogany (*Cercocarpus montanus* Raf.)

Other notable plants are:

- Bearberry (*Arctostaphylos uva-ursi*)
- Prairie sage (*Artemisia ludoviciana*)
- Yucca (*Yucca glauca* Nutt.)
- Wild rose (*Rosa acicularis* Lindl.)
- Dock (*Rumex* spp.)
- Mullein (*Verbascum thapsus* L.)

A core sample and growth ring study showed that trees were between 100 and 150 years of age. High and low growth rates occurred during their lifetimes, however, relatively good pine growth has occurred during the last few years.

Conclusions:

From the standpoint of the unique and valuable ecology of the Monument Creek floodplain, the best construction site would be one which destroys as little as possible of the existing habitat. Expansion at Site 1, adjacent to the existing lagoon is preferable to a new and larger site elsewhere. Site 5 is unacceptable because of its unstable soils and changing patterns of erosion.

Mammal Communities:

During field studies, sightings were made or evidence was found of the following mammals:

1. Coyote (*Canus latrans*): Sites 1, 2, and 3.
2. Fox (probably *Urocyon cinereoargenteus*, gray fox): Site 1.
3. Beaver (*Castor canadensis*): Sites 1, 2, and 3. Dams at Site 1 and just north of Monument Lake.
4. Muskrat (*Ondatra zibethicus*): Site 3, north end of Monument Lake.
5. Pocket Gopher (probably *Thomomys talpoides*, northern pocket gopher): Sites 1, 2, 3, and Monument Lake.
6. Pine Squirrel (Tamiasciurus hudsonicus): Monument Lake.
7. Voles (*Microtus* spp.): Sites 1, 2, 3, and 4.
8. Porcupine (*Erethizon dorsatum*): Monument Lake.

The following mammals may also occur in the Monument Creek flood plain, based upon published literature and habitat observation:

Mule deer
Northern grasshopper mouse
Spotted skunk
Striped skunk
Raccoon
Long-tailed weasel
Desert cottontail
White-tailed jackrabbit

The Monument Creek flood plain is relatively homogeneous, particularly in south portions of the study area where sandy meadows and brushy stream banks exist. These areas probably do not support a large mammal fauna because of area restriction and lack of soil and vegetation types. No mammal sign was found at Site 5; however, the mammal population here is probably similar to that of Monument Creek.

Birdlife:

During an April 1974 bird census, waterfowl, normal winter residents and early migrants such as Mountain Bluebrids were seen. Although limited by the season, observations at each of the proposed sewage facilities sites revealed the following: (See Figure 9)

Site 1: Pond and swamp area immediately south of the existing lagoon is rich in bird life and is used extensively for feeding, breeding, and nesting.

Site 2: Good representation of common birds of pasture and streamside species such as juncos, killdeers, and common snipes.

Site 3: Second in richness of species only to Monument Lake and its associated marsh. Extensively used as a feeding and breeding ground. Great variety of habitats and a good representation of birds.

Site 4: Fewest birds of the sites studied because of flood disturbance in the area. Construction would cause little damage to local bird residents. Downstream Monument Lake and marsh has the greatest number and variety of birds, including waterfowl and shore bird and also beaver, muskrat, and fish populations. If the facility at Site 4 resulted in pollution of the lake and marsh, it would have a disastrous effect on these populations.

Site 5: Low population of common birds with the most interesting species being the Loggerhead Shrike. Because Dirty Woman Creek is already fairly disturbed, a sewage facility would have little effect upon birds

Fish:

A sampling of fish at the four sites on Monument Creek for this study indicated that the white sucker (*Catostomus comersoni*) constitutes the major species. Sixty of the seventy-six fish taken were of this type. The balance consisted of northern creekchub (*Semotilus atromaculatus*), 8; longnose dace (*Rhinichthys cataractae*), 3; plains stone roller (*Campostoma anomalum*), 3; Rio Grande chub (*Gila nigrescens*), 2. Eighty percent of the fish were taken from Site 1.

GEOLOGY AND SOILS

Local geologic features have been created primarily by events associated with the creation of the Rampart Range. During the Laramide mountain building period, the range was forced upward along a north/south fault. This fault has long been inactive and has not been associated with seismic activity in historic times. To the west, Precambrian granite is upthrust into the commanding mountain range.

East of the fault lies bedrock of Dawson-Arkos laid down during late Createous and Paleocene periods as a sedimentary deposit up to 2,000 feet in thickness. The Dawson Formation is derived from adjacent granitic highlands and consists of coarse Arkosic sandstone interbedded with siltstone and clay. The Dawson Formation forms the bed or eastern boundary of Monument Creek through most of the service area.

Over the Dawson Formation are Quaternary deposits of alluvium or mesa gravels which underlie the City of Monument and the uplands west of Monument Creek. These have been cut during successive periods by easterly flowing streams tributary to Monument Creek, leaving finger-like ridges. The ridges are composed of alluvial mesa and terrace gravels at higher elevations and colluvial deposits on some of the steeper slopes.

East of Monument Creek the higher elevations are gently undulating hills of the Dawson Formation. In Palmer Lake, the Dawson is exposed in picturesque ramparts locally known as Elephant Rocks. Pine trees tend to grow where the Dawson Formation is within 15 feet of the surface because it is less permeable than overlying alluvium.

Soils in the area are generally sandy or gravelly with fine clays which are derived from adjacent upper Dawson Formations. Surface deposits usually have good porocity, but at depth, heavy clay lenses of random occurrence prevent vertical movement to the water table. Soils have generally permitted the use of septic tank drainage fields on 5-acre tracts of land. Where dense population concentrations exist, septic tank and cesspool use has proven unsatisfactory.

In Palmer Lake, sloping sites on impervious underling formations have permitted effluent to leach onto the surface. In ravines east of Highway 25, high water tables may make use of septic tanks impracticable. West of Monument Creek, septic tanks have worked well and are expected to continue to do so on the large tracts platted there.

Along Monument Creek soils are primarily Pring and Tomah Loamy Sands. The Pring soils are gently sloping and well drained. Surface layers to 18 inches in thickness have a sandy loam or loamy sand texture. The subsoil is a sandy loam but may be more gravelly. Limitations are slight for septic tank use but severe for sewage lagoons, due to rapid permeability. Pollution is a hazard for septic tanks because of permeable substratum. Stability is fair to good for dikes and levees and the shrink-swell potential is low. Limitations are slight for shallow excavations except for loamy sand which is severely limited.

The Tomah Soils are deep and well drained. In surface layers the upper parts are loamy sand and the lower parts are sand of 24 to 30 inches thickness. The 2- to 5-foot thick subsoil is sand with thin bands of sandy clay loam, overlying a sand or loamy sand substratum. Limitations for septic tank use are slight but pollution is a hazard in places because of permeability in substratum. Lagoon use has severe limitations because of rapid permeability. Excavations are limited severely by loamy sand and sand textures. Compaction is fair to good for embankments.

HYDROLOGY

Surface Water

The area served by the Palmer Lake, Monument, and Woodmoor Sanitation Districts lies within the Arkansas River Basin. The study area is drained by Monument Creek which flows south and discharges into Fountain Creek north of Colorado Springs. Within the Monument Creek watershed are several small lakes or reservoirs and numerous streams.

In the study area are Palmer Lake, Monument Lake, and Woodmoor Lake. Palmer Lake is a small natural lake lying just east of the Palmer Lake City Center. Several small streams feed the lake which has no apparent outlet, although it is believed to drain into Monument Creek. The Denver & Rio Grand railroad enlarged Palmer Lake to its 10-acre size near the turn of the century. Monument Lake on Monument Creek between the cities of Palmer Lake and Monument, is a small manmade reservoir 37 acres in size, used primarily for irrigation and recreation. Woodmoor lake was built by the developers of Woodmoor for recreational purposes. No data on the water quality of these lakes were found.

Monument Creek is the major stream within the study area. It originates on the east slope of the front range west of the City of Palmer Lake and drains south to Fountain Creek in Colorado Springs. The stream in the study area has a wide flood plain with steep side slopes. Vegetation on the

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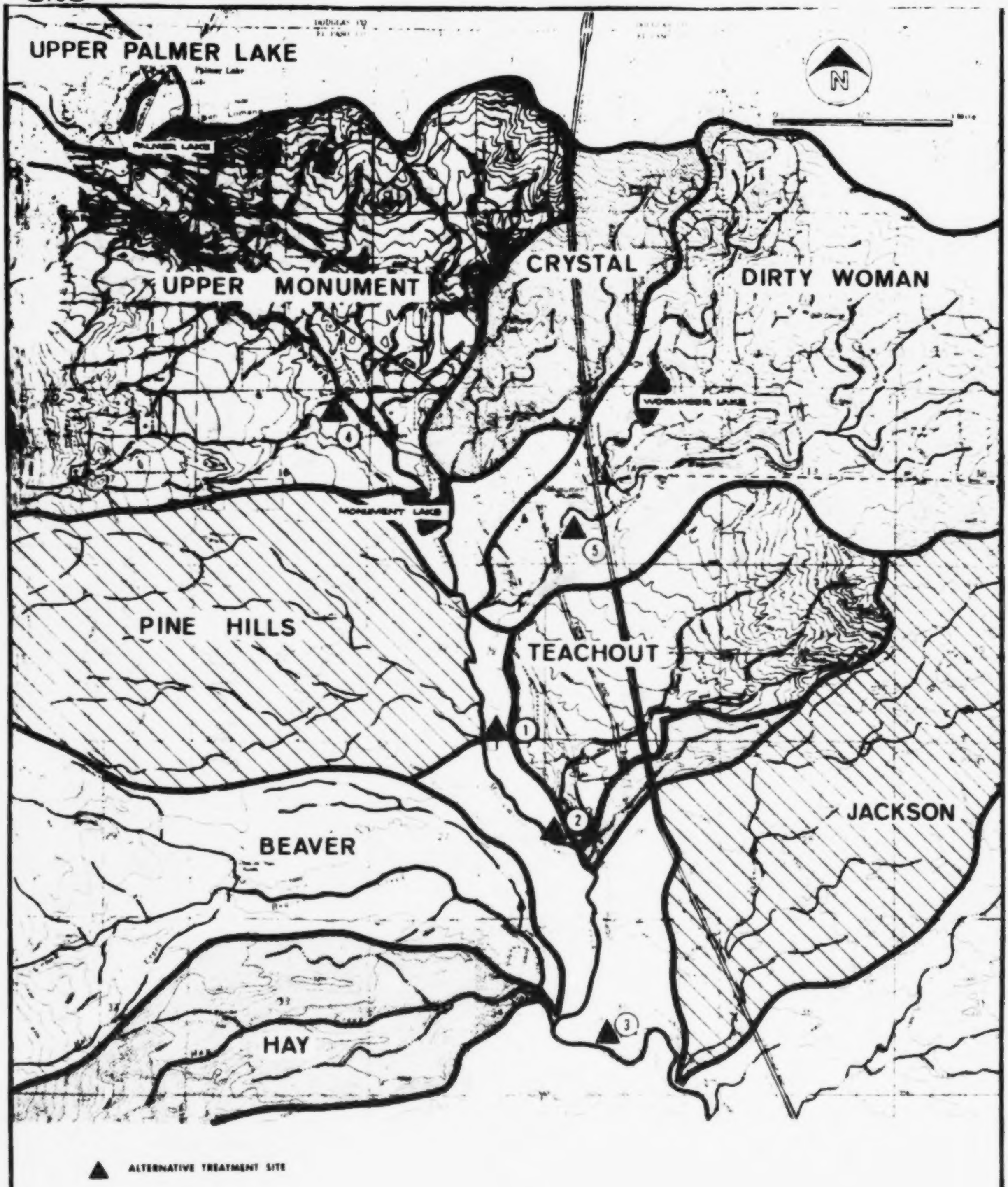
UPPER PALMER LAKE
Palmer Lake
PALMER LAKE
N
UPPER MONUMENT
CRYSTAL
DIRTY WOMAN
WOODMOOR LAKE
MONUMENT LAKE
4
5
PINE HILLS
TEACHOUT
1
2
BEAVER
JACKSON
3
HAY
▲ ALTERNATIVE TREATMENT SITE

FIGURE 3

MAJOR DRAINAGE AREAS

slopes varies from grass to Pine except where banks are bare and eroding. The stream meanders within its bed and is periodically subject to flooding.

Very little data is available on the flows of Monument Creek within the study area. Streamflow and water quality have been measured at the mouth of Monument Creek. This data is influenced by water diversions through Monument Creek and is of little value in establishing flow and water quality within the study area.

At least four or five major floods have occurred in the last 40 years. On 30 May 1935, 18 inches of rain fell on the headwaters of Monument Creek between 6:00 a.m. and 6:00 p.m., resulting in the most disasterous flood within local knowledge. Several bridges were destroyed and the railroad tracks between Monument and Pike View were intermittently undercut. Other floods have occurred in 1942 or 43, 1945 and 1965.

Although these floods were serious, little is known about actual flood volumes. Channel modifications for the proposed project at Monument lagoon have been designed for a flow of 20,000 cfs. This is believed to be the 100-year floodflow at the northern boundary of the Air Force Academy approximately 2 miles below the existing Monument lagoon. The lagoon engineer is also presently studying improvements needed at the Monument Lake dam above the existing Monument lagoon. Spillway design will be based upon a flow of 11,000 cfs.

Although seasonal variations in streamflow are not known, they are expected to be extreme. During dry periods, streamflow at the proposed treatment plant could be less than treatment plant discharge. Limited water quality data is available for the local area.

Monument Creek was found to have a dissolved oxygen level of 7.0 to 9.3 mg/l above Monument Lake. Creek temperatures varied between 30° and 64° F and the average BOD was 2.34 mg/l. The maximum BOD value recorded in a 2-year period was 3.8 mg/l.

Below the Monument lagoon the dissolved oxygen level was between 7.3 and 9.3 mg/l. Water temperature varied between 30° and 62° F, and the average BOD was 1.5 mg/l. The 2-year maximum was 2.3 mg/l. The lower water quality found in Monument Creek between Palmer Lake and Monument is probably due to the surfacing of septic tank discharge in Palmer Lake a condition which necessitated the proposed project.

The existing standards for discharge of waste to waters of the state are:

TABLE 1

EXISTING STATE DISCHARGE STANDARDS

DATE EFFECTIVE	SUSPENDED SOLIDS mg/l	BOD mg/l	TURBIDITY JTU	COLOR Units
Jan. 15, 1973	30	30	30	30
July 1, 1975	25	25	25	25
July 1, 1978	20	20	20	20

1. Settleable solids not greater 0.5 milliliters per liter
2. pH between 6.0 and 9.0
3. The fecal coliform shall not exceed 500 per 100ml for waters classified B_3
4. The fecal coliform shall not exceed 5000 per 100ml.
5. Dissolved oxygen must be greater than 2mg/l
6. Residual chlorine must be between 0.1 and 0.5 mg/l.
7. Total oil and grease less than 10mg/l

These and proposed water quality standards may change as a result of pending studies. Changes being considered are:

1. Continuing present BOD and suspended solids standards of 30 mg/l until 1983, at which time the standard would be 20 mg/l.

2. Changing the standard in 1977 to: fecal coliform count from a grad sample shall not exceed 5,000 for a 100 ml sample and shall not exceed the geometric means of 200 per 100 ml for 30 days of sample and 400 per 100 ml for 7 days of samples.

3. Removal of standards for settleable solids, turbidity, color, and dissolved oxygen.

4. Changing standards for residual chlorine level in the effluent to a maximum of 0.5 mg/l with no minimum requirement.

5. Deletion of the phosphorus standard.

Department of Health staff feel that these standards will probably be adopted this year. The earliest they could become effective is June 1974.

More restrictive discharge standards could be imposed upon the study area with the completion of the PPACG Regional Water Quality Management Plan which is now in preparation. Such high standards could affect the future expansion of the proposed facility.

Ground Water

Two major water bearing formations are found in the study area: (1) Laramie-Foxhill aquifer; and (2) Dawson Arkose aquifer. Several wells within the study area draw water from these deep formations.

The Laramie-Foxhill aquifer is composed of water-yielding sandstone beds in the upper part of the Foxhill sandstone and the lower part of the Laramie formation. This aquifer is confined above and below by thick intervals of relatively impermeable beds. The aquifer can be divided into three units: The highest unit which is about 75 feet thick is composed of well sorted fine to medium grain sandstones; the middle unit which is 65 feet thick is composed of sandy shale interbedded with thin seams of coal; the lowest unit which is 150 feet thick is composed of fine to medium grain sandstone.

The Laramie-Foxhill aquifer lies relatively near the surface in the vicinity of Palmer Lake, dropping to 1,000 feet below the surface in the vicinity of Monument and to 2,000 feet on the eastern edge of Woodmoor. Recharge to the Laramie Foxhill aquifer is by precipitation in areas where this formation outcrops. The Laramie-Foxhill aquifer extends from south of Colorado Springs to the north of Greeley, Colorado and from Golden and Monument on the west to Deertrail and Buick, Colorado. Few wells have been drilled in the Laramie Foxhill aquifer in northwest El Paso County and reported yields are less than 100 gallons per minute.

The Dawson Arkose is a multiaquifer formation, composed of alternating beds of fine to very coarse grained arkosic sandstone, variagated claystone, siltstone and shale. Several water wells have been developed in the Dawson Arkose near Monument Creek, from about 200 to 1,000 feet in depth. The aquifers in the lower part of this formation are under artesian pressure and reported yields range from 5 to 400 gallons per minute.

Recharge to the Dawson Aquifer is by precipitation in areas where the aquifers outcrop and by recharge from streams which overlay the aquifer. However, in places where streams cut through aquifers which are under artesian pressure seepage may result. There is some evidence that part of the flow in Monument Creek is drainage from the Dawson Arkose aquifers.

The study area lies within a water short area. Reliable sources of surface water are not available and future development must rely on ground water. The recharge rate to the Laramie Foxhill aquifer is believed to be low and its continued use in the study area and elsewhere in Colorado could result in low yields. The Dawson aquifer could also be depleted if heavy development and water use in this and other areas continues unabated. Restriction of development within the study area would have little effect on the availability of water from the Laramie Foxhill and Dawson Aquifers.

The water quality from the two aquifers has been documented by geologic studies performed for the Air Force Academy.(12) Generally the Dawson formation produces water which is less mineralized than the Laramie Foxhill aquifer. Water from the Dawson aquifer is suitable for both irrigation and domestic purposes while water from the Laramie Foxhill aquifer may not be suitable for irrigation due to high levels of disolved solids. Flouride levels as high as 2 mg/l have been measured in water from the Laramie Foxhill aquifer which could restrict its use for domestic purposes.

POPULATION

The population of northwest El Paso County has been relatively stable over a long period of time. People were concentrated in and near established towns and few families resided in outlying areas. During the past few years, improved highway access and the establishment of the Air Force Academy stimulated an increase of building and population growth in the area. Some 3,000 home sites were created at Woodmoor. Large and small lot subdivisions were laid out in and around Palmer Lake and Monument. City boundaries have expanded to take in new development.

In the 14 years between 1960 and 1974, the population of Palmer Lake, Monument, Woodmoor and vicinity increased from 745 to 2,801, at an annual average of 9.9% per year. See Table 2. Some 2,600 of the current local population will be served by the proposed project. During the summer months it is estimated that in Palmer Lake there are an additional 175 persons in summer camps on the average.

Based upon an evaluation of recent population projections available locally, it is assumed that the total population of Palmer Lake, Monument, and Woodmoor will increase from the current 2,800 to 11,845 persons by 1990. The total for 1990 is in agreement with the Environmental Impact Appraisal prepared for this project by EPA in April 1973.

For the 16 year period to 1990, estimated growth for the three communities averages 9.4% per year, comparable with the 9.9% per year for the previous 14 years. By comparison,

TABLE 2

POPULATION PROJECTIONS BY SELECTED YEARS TO 1990

AREA	1960(8)	1970(8)	1974(3)	1975(6)	1980(6)	1985(6)	1990(6)	1990(4)
Monument	204	393	803	830	950	1075	1200	5235(5)
Palmer Lake	542	947	1177	1280	1500	1825	2200	2375
Woodmoor	0	315	821	1105	2350	4625	8500	10700
Total	746	1655	2801	3065	4800	7525	11845(1)	18310
Total Served by Project			2600(2)					
Design Population for Service Area(6)			2801	3065	4800	7525	11845	
Fringe Areas(7)	0	200	400	419	656	893	1130	1130
Total For Area	746	1855	3201	3484	5456	8418	12975	19440

(1) From Environmental Impact Appraisal, EPA, April 1973

(2) Estimate by Palmer Lake Sanitation District

(3) Current estimate by Pikes Peak Area Council of Governments

(4) Projections by PPACG for City of Palmer Lake planning study

(5) Based upon development of Village" project at Monument (PPACG)

(6) Projections, this study: based upon 9.4% average annual increase 1974 to 1990

(7) PPACG estimate for Fringe Areas

(8) U.S. Bureau of Census

the northwestern El Paso County planning sector is projected to increase 7.6% per year between 1964 and 1990.(11) The current PPACG moderate rate projection to 1990 for total El Paso is 3.4% average growth per year between 1970 and 1990. Table 2 also provides estimates for each 5 years to 1990 for the service area.

The last column gives current estimates by PPACG staff for 1990 for the three communities. These appear optimistic in the light of current development rates, and were not used for this assessment.

LAND USE

Land use in the area consists primarily of single-family homes. Older dwellings are concentrated in the original portions of Palmer Lake and Monument. Clusters of substantial new homes have been constructed through the middle portions of Woodmoor. (Figure 6) Mobile home developments exist in southern Palmer Lake and Monument. Thirty-seven apartment units are being constructed in the Woodmoor community center and condominium units are under construction on the north side of Monument Lake.

A few commercial areas exist in Palmer Lake along Highway 105 and in Monument near the Highway 25-105 interchange. In Woodmoor a commercial area has been established northwest of the interchange. It consists of approximately 10 business and service establishments and a 127-unit motel serving the surrounding countryside and the traveling public. Two concerns have located in the Woodmoor Technical Center north of Highway 105 along the freeway.

Prior to the establishment of the Air Force Academy, land surrounding Palmer Lake and Monument was largely vacant. With little irrigation, the land supported a minor level of grazing and dryland farming. In recent years large areas have been subdivided. Except for Woodmoor, home sites are largely from 2 to 5 acres in size intended to utilize septic tank drainage fields. Homes in these areas are widely scattered and probably do not total more than 150 in all.

Currently a new 250-bed hospital is under consideration for a site on the north side of Highway 105 east of the Woodmoor shopping center. A 1,300-unit Village Association Project is under consideration in southeast Monument. A 100 unit condominium apartment project has been considered for a location on Woodmoor Lake.

The Atchison, Topeka, and Santa Fe and the Denver and Rio Grande Western Railroads traverse the Palmer Lake-Monument communities, generally running parallel to and within 500 to 3,000 feet of Monument Creek. Consideration has been given to abandonment of the Santa Fe line in this vicinity and consolidation with the DRGW line.

Little development has occurred along or near Monument Creek or other drainageways except for older portions of Palmer Lake and apartments under construction at the Point on Monument Lake and the artificial Woodmoor Lake. Pike National Forest which forms the western border of the area constitutes a vast natural wildlife preserve. A former Forest Service experiment station exists just west of Monument. This is now utilized as a day-use educational center for nature studies. City-owned land around Monument Lake is leased for recreational and campground use.

Monument Creek supports an aquatic community and local wildlife population. Except for its flood plain and steep slopes along the Rampart Range and projecting ridges, the entire area is generally buildable.

LAND USE PLANS

A city plan prepared for Palmer Lake(2) has not been adopted; however, it calls for low density residential development at two to five units per acre in most city areas and for a greenway on Monument Creek. The city has been zoned. Zones follow the existing patterns of land uses and do not contemplate any substantial change in the community.

THE PPACG and El Paso County cooperated in the preparation of the "Pikes Peak Regional Land Use Plan, 1990," March 1970. Copies are unavailable but may be examined in the PPACG office.

This plan is based upon 1964 land use data. Although some incompatible development has occurred since the preparation of the plan, PPACG staff indicate that it still reflects planning policy for the area. These Policies include:

- Avoidance of flood plains and slopes in excess of 20%. Maintaining the identity and individuality of Palmer Lake, Monument, and Woodmoor;
- Improvement of the local economy so that the area will become more self sufficient and less of a bedroom residential area;
- Maintain commercial uses for local convenience shopping and tourist uses;
- Conserve and expand recreation potentials of Monument and Palmer Lakes and Monument Creek;
- Develop area-wide sewerage facility for Palmer Lake, Monument, and Woodmoor.

The 1990 land use map shows residential development up to four units per acre for the Monument, Palmer Lake communities; for the original Woodmoor development; and for the Pine Hills area west of Monument Creek. Recent Woodmoor platting along the north side of Higbee Road is not included. In Monument and Palmer Lake, residential densities would range from four to ten units per acre. (Figure 7).

South and east of these residential areas and between Monument Creek in the National Forest in the Palmer Lake area, land is designated in an agricultural/unused category.

Commercial and industrial concentrations are shown where these currently exist, including the 70 acre Technical Center at Woodmoor.

"Horizons 76," published by PPACG, is an open space system plan. In northwest El Paso County, it calls for an open space corridor along Monument Creek which links with open space east and west. It also calls for creating park and recreational facilities on two parcels owned by the City of Colorado Springs on Beaver Creek west of Monument Creek.

The City of Monument is being assisted in the preparation of its first city plan by PPACG staff. What this plan will include is not known, but preliminary studies suggests that it will retain existing residential districts and establish ample areas for commercial and general development.

County zoning in areas outside cities and sanitary districts is generally 5-acre farm zones or 2 1/2-acre rural residential zones. In all 5-acre zones, septic tank use is permitted. The 2 1/2-acre rural residential zone is designed for areas with sewer systems utilizing private wells, and may utilize septic tanks if approved by local health officials. County planning staff indicate that these zones function somewhat as holding zones. Conversion to urban densities can be expected where extension of urban facilities is practicable. The county zoning ordinance requirement for Local Approval of sewerage facilities would apply to the proposed project.

A zoning ordinance will be adopted in Monument following adoption of the city plan under study. In Woodmoor, deed restrictions control development. Pine Hills deed restrictions limit uses to dwellings and other recent subdivisions probably have similar restrictions.

II PROJECT ALTERNATIVES

This section will describe alternatives considered for the treatment of waste water for the Palmer Lake Sanitation District and for the Monument-Woodmoor area.

MAJOR OBJECTIVES

Major objectives of the proposed project are:

1. To provide a waste water collection and treatment system for the City of Palmer Lake.

   Palmer Lake is the only developed community in this part of the county which does not have a sewerage system. Septic tank drainage fields and cesspools utilized in the city through the years have failed, resulting in effluent upon the surface and a recognized hazard to public health. For these reasons, the provision of a sewerage system for the city is the primary objective of the project.

2. To increase the capacity and improve the level of treatment of the Monument-Woodmoor treatment lagoon.

   The original Monument lagoon was constructed in 1963 to serve the City of Monument. Subsequently, the Woodmoor development was included in the system and aeration equipment was added to increase treatment capacity. Increasing population growth has resulted in overuse of the lagoon, pollution of Monument Creek, and undue odor problems. A cease and desist order was issued by the State Health Department in 1972. Elimination of the deficiencies of the Monument lagoon is the second objective of the project.

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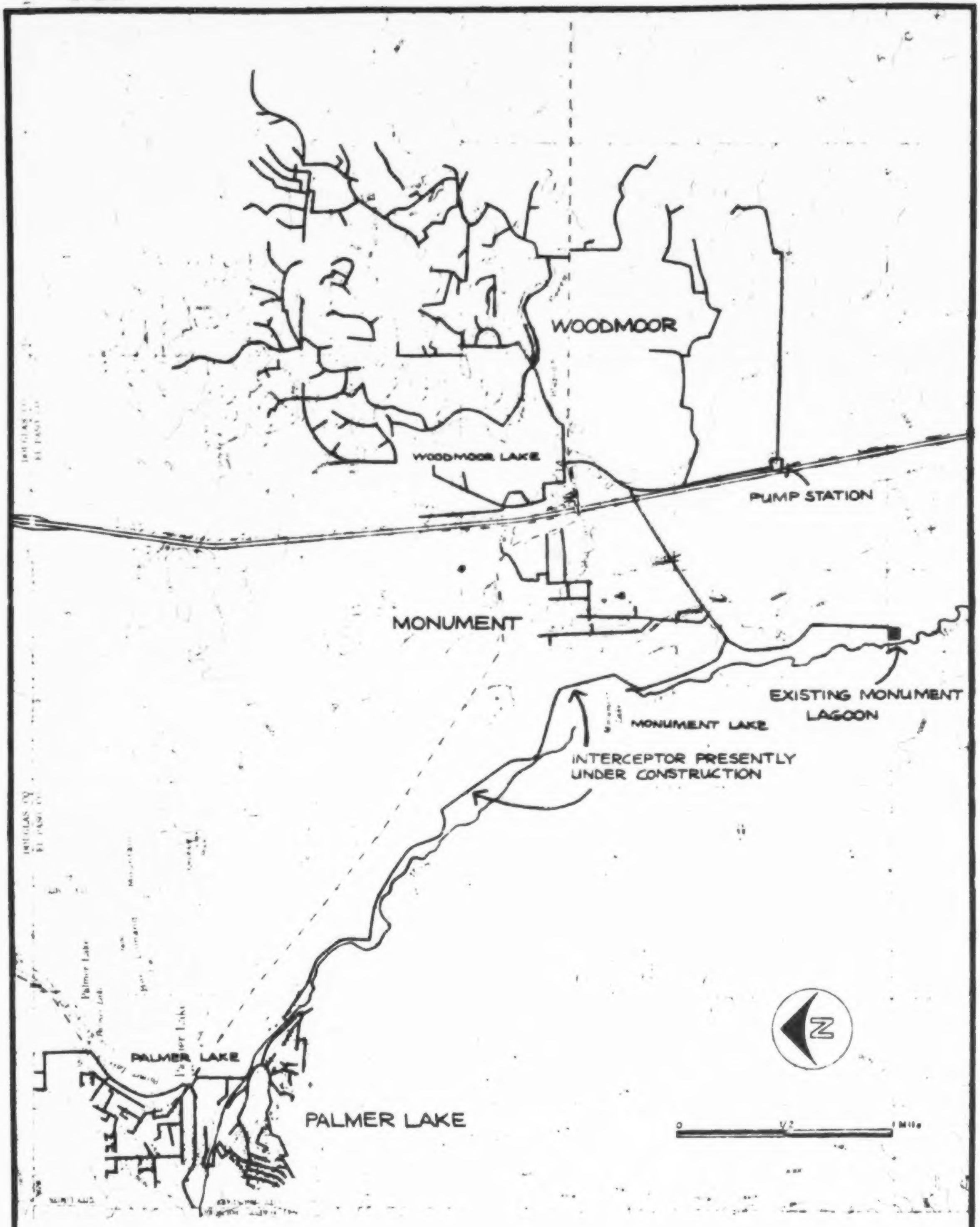
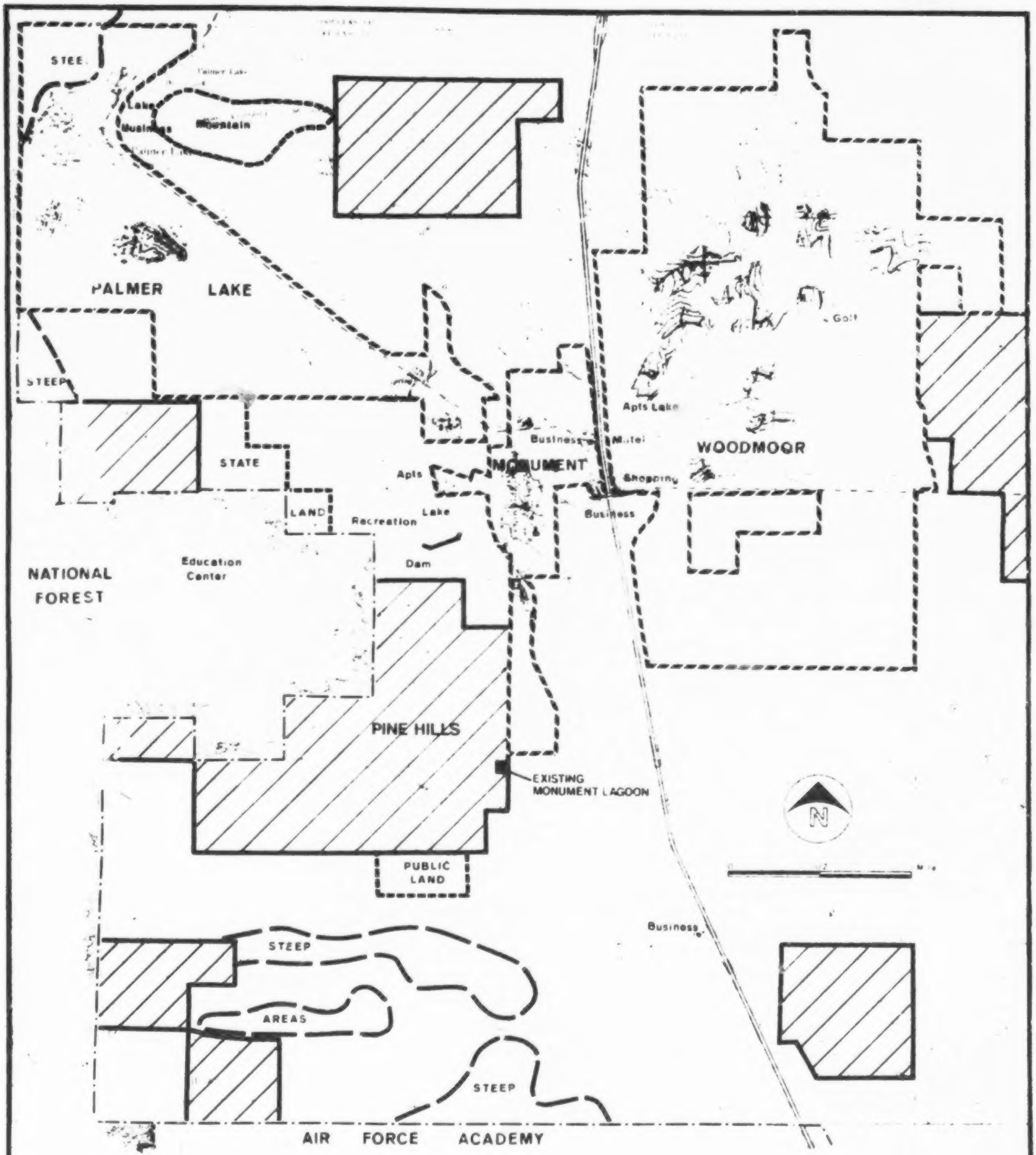

WOODMOOR
WOODMOOR LAKE
PUMP STATION
MONUMENT
EXISTING MONUMENT LAGOON
MONUMENT LAKE
INTERCEPTOR PRESENTLY UNDER CONSTRUCTION
PALMER LAKE
PALMER LAKE
N
0
1/2
1 Mile

FIGURE 4

EXISTING COLLECTION SYSTEM


STEEP
Palmer Lake
Lake
Business
Mountain
PALMER LAKE
STEEP
STATE
LAND
Apts
Recreation
Lake
Dam
Education Center
NATIONAL FOREST
Business
Motel
MONUMENT
Shopping
Business
Apts Lake
Golf
WOODMOOR
PINE HILLS
EXISTING MONUMENT LAGOON
PUBLIC LAND
N
Business
STEEP
AREAS
STEEP
AIR FORCE ACADEMY

LEGEND

MAJOR CONCENTRATIONS OF DWELLINGS

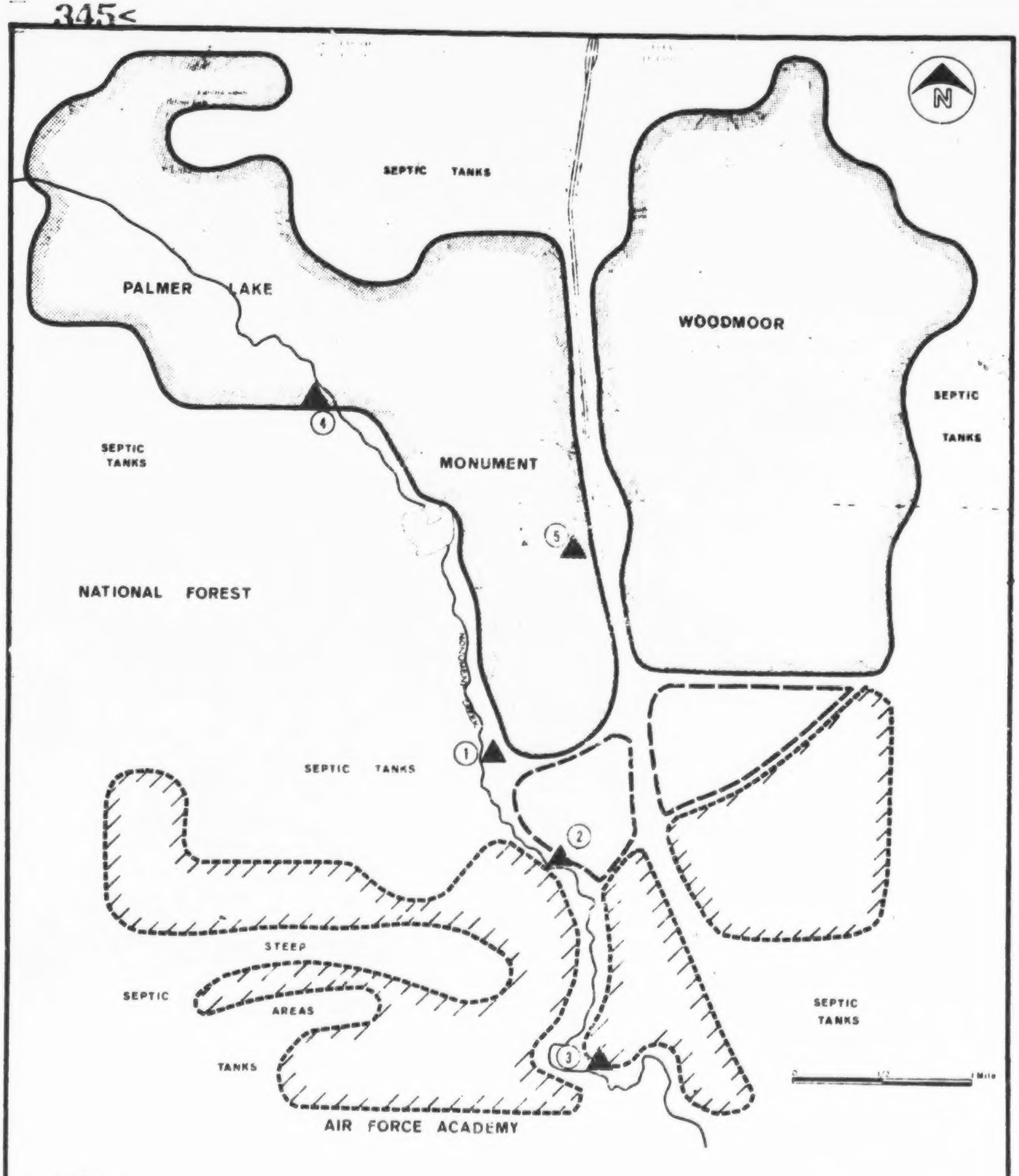
▨ LARGE LOT SUBDIVISIONS SEPTIC TANK USE

- - - - DISTRICT BOUNDARIES

FIGURE 6

LAND USE
AND
DEVELOPMENT FACTORS

345<


N
SEPTIC TANKS
PALMER LAKE
WOODMOOR
SEPTIC TANKS
SEPTIC TANKS
MONUMENT
4
5
NATIONAL FOREST
MONUMENT CREEK
1
SEPTIC TANKS
2
STEEP
SEPTIC
AREAS
TANKS
3
SEPTIC TANKS
0 1/2 1 Mile
AIR FORCE ACADEMY

LEGEND

PRIMARY SERVICE AREA
AREAS SEWERABLE FROM TREATMENT SITES 1,4 & 5

SECONDARY SERVICE AREA
AREAS SEWERABLE FROM ALTERNATE SITE 2

POSSIBLE LONGTERM SERVICE AREA
AREAS SEWERABLE FROM ALTERNATE SITE 3

FIGURE 5

SEWER SERVICE AREAS

3. To develop a combined, area-wide waste water treatment facility for the urban portions of the northwest El Paso County.

   Palmer Lake, Monument, and Woodmoor are contigious and are tending to merge into a larger community separated only by the freeway. All areas drain to Monument Creek. Water quality and land use plans of El Paso County and PPACG are based upon a single treatment facility for the three areas.(18, 19, 20) Although joint treatment is a short-and long-term objective of the project, this environmental analysis also gives full consideration to separate facilities for Palmer Lake, Monument, and Woodmoor.

4. To preserve and protect the quality of surface and ground water in the Monument Creek drainage in conformance with applicable public health water quality standards.

   Monument Creek is a valuable recreational resource for people of the region and an important wildlife habitat. Aquifers are utilized for domestic water supply and contribute to flows of Monument Creek. For these reasons, proposed treatment facilities must be located and designed to maintain water quality.

PROJECT CONSTRAINTS AND ASSUMPTIONS

Land use planning policies of El Paso County and the PPACG call for a limitation on the southward expansion of urban growth toward the Air Force Academy and an emphasis on development in a relatively compact form in the vicinity of Palmer Lake-Monument-Woodmoor. These policies constitute a constraint upon the location of potential treatment sites.

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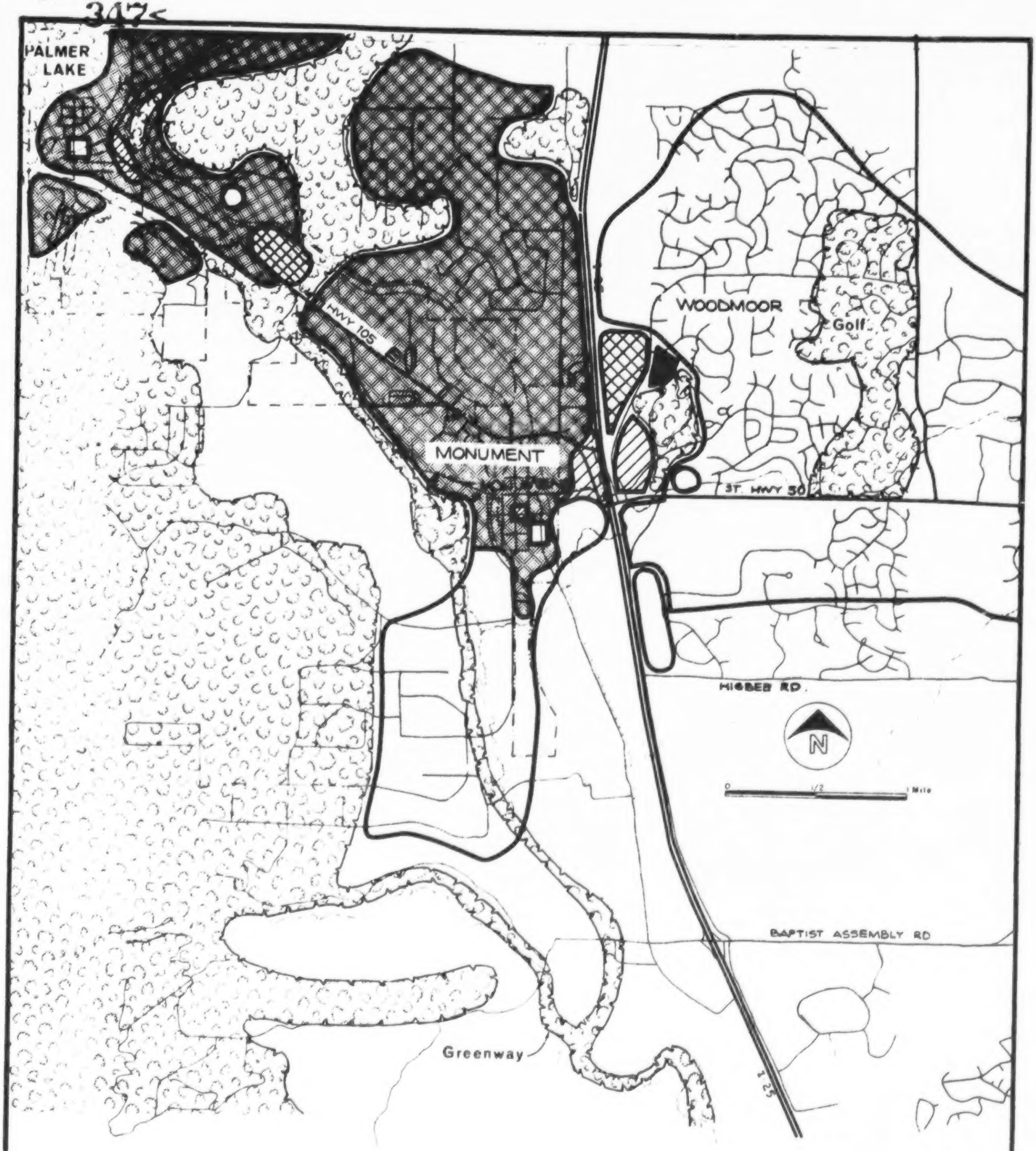

PALMER LAKE
HWY 105
WOODMOOR
Golf
MONUMENT
ST. HWY 50
HIGBEE RD.
N
0
1/2
1 Mile
BAPTIST ASSEMBLY RD
Greenway
I-25
LEGEND
RESIDENTIAL 0-4 UNITS PER ACRE
RESIDENTIAL 4-10 UNITS PER ACRE
RESIDENTIAL 10+ UNITS PER ACRE
COMMERCIAL
INDUSTRIAL
RECREATION – OPEN SPACE
AGRICULTURE – UNDEVELOPED
PUBLIC OR PUBLIC SERVICE USE

FIGURE 7

LAND USE PLANNING

REGIONAL LAND USE PLAN

1990

PIKES PEAK REGIONAL COUNCIL OF GOVERNMENTS

MAY 1970

The proposed project is to be constructed and financed by the Palmer Lake Sanitation District. The enlarged treatment facility, however, would be a joint one, shared by the Monument and Woodmoor Sanitation Districts. This study does not evaluate the financial capability or political feasibility of participation by the Monument or Woodmoor Districts in the financing of new joint treatment facilities. Nevertheless, these districts already have a substantial investment in the existing Monument lagoon. Whether these districts would be willing or able to fund additional treatment facilities is a potential constraint upon alternatives considered.

Public health problems of concern to the County Health Department are continuing in Palmer Lake with present use of septic tanks and cesspools. The Monument lagoon health hazard, identified by the Colorado Health Department over 2 years ago, will continue and worsen until corrected by a facility of larger capacity. These health problems constitute a serious time constraint for a decision upon the project.

STRUCTURAL AND NONSTRUCTURAL ALTERNATIVES

The study does not evaluate a "do nothing" alternative since this is contrary to project objectives. Failure to proceed with one of the project alternatives will permit serious water pollution, health hazard, and environmental problems to become steadily worse.

Structural methods for collection, treatment, and disposal of sewage are presented in the following section. These are described as Alternatives A, B, C, D, and E. Alternatives A, B, D, and E provide sewer service primarily to existing urban and urbanizing areas where septic tank use is no longer feasible. Alternate C would make possible sewering of rural areas not as yet planned, platted or zoned for urban densities.

A nonstructural alternative to Alternate C is to retain rural areas tributary to Site 3 in the present 5-acre county zoning category. According to county health officials the use of septic tanks for development which might occur in this area would not lead to the pollution problems which have occurred in Palmer Lake and Monument. Five-acre zoning is consistant with the "Regional Land Use Plan, 1990," "Regional Interim Water Quality Management Plan," "Water-Sewer Facilities Plan for the Monument-Palmer Lake-Woodmoor Basins," and the "Service Plan for the Palmer Lake Sanitation District Project."

Since additional areas served by Alternate C do not lie within the three sanitation districts, implementation of this alternative would depend upon land use controls applied by El Paso County. Local plans are based upon retaining the area in an agricultural-undeveloped category. County staff indicate, however, that this policy would be difficult to implement if Alternate C is constructed because it would probably strongly induce development at urban densities. Without sewerage service, housing will continue to occur at low density on septic tanks in conformance with zoning and planning.

TREATMENT SYSTEMS AND SUBSYSTEM ALTERNATIVES

Waste water treatment systems have four constituent parts of subsystems:

A. Effluent Disposal
B. Treatment
C. Collection System
D. Sludge Disposal

Effluent Disposal

Effluent from waste water treatment systems may be discharged into streams, to the ground water system, or to irrigate the land. Disposal of effluent in creeks should be limited to those which flow most of the year. Monument, Beaver, and Hay Creeks are the only streams which flow for a substantial part of the year. Discharge to Beaver Creek and Hay Creek would require a treatment facility location near the northern boundary of the Air Force Academy. This location would induce a pattern of development inconsistent with area-wide planning. Discharge of effluent into Monument Creek should be limited to that portion of the stream which lies below Monument Lake. Discharge above the lake would risk algae growth from high nutrient levels.

Ground water recharge with waste water effluent is considered to be impractical in this area. Recharge to the Laramie-Foxhill and Dawson aquifers could induce an indirect reuse cycle since these aquifers are the major source of water in the study area. High levels of treatment would be required in order to maintain the integrity of the ground water system.

Land disposal of waste water effluent is an alternative which deserves serious consideration. Two disposal systems are applicable: septic tank drainage fields and golf course or agricultural irrigation. Septic tank use should be limited to single-family dwelling areas on parcels at least 5 acres in size.

Since most water used by Monument and Woodmoor is ground water, effluent reuse for golf course or agricultural irrigation would not violate downstream water rights. The Woodmoor golf course is a possibility for land disposal that has been considered. The use of waste water would reduce requirements for potable water and fertilizer. Soil studies should be made to insure that underlying ground water will not be contaminated and that soils have the permeability to receive the effluent without causing aesthetic and health problems in the immediate area.

The water supply for Palmer Lake is primarily surface water which must be returned to the stream in order to hold downstream water rights whole.

The only acceptable location for disposal to surface waters is Monument Creek below Monument Lake. Use of waste water for irrigation of the Woodmoor golf course may be feasible at a later date.

Treatment Systems

Projected waste water loads for the three sanitary districts are shown in Table 3 along with organic and suspended solid loadings. The average daily waste water flow is assumed to be 120 gallons per capita per day. The per capita biochemical oxygen demand (BOD) and suspended solids (SS) loading is assumed to be 0.2 and 0.22 pounds per capita per day respectively.

TABLE 3
WASTE LOAD PROJECTIONS

		1975			1980			1985			1990	
Area	Flow	BOD[2]	SS[3]	Flow	BOD	SS	Flow	BOD	SS	Flow	BOD	SS
Monument	99,600	166	183	114,000	190	209	129,000	215	237	144,000	240	264
Palmer Lake	153,600	256	282	180,000	300	330	219,000	365	401	264,000	440	484
Woodmoor	132,600	221	243	282,000	470	517	555,000	925	1,018	1,020,000	1,700	1,870
TOTAL	385,800	643	703	576,000	960	1,056	903,000	1,505	1,656	1,428,000	2,380	2,618

1 Flow = population (120 gal/cap/day) = gal per day

2 BOD = Biochemical Oxygen Demand = population (0.2 lbs/cap/day) = lbs/day

3 SS = Suspended Solids = population (0.22 lbs/cap/day) = lbs/day

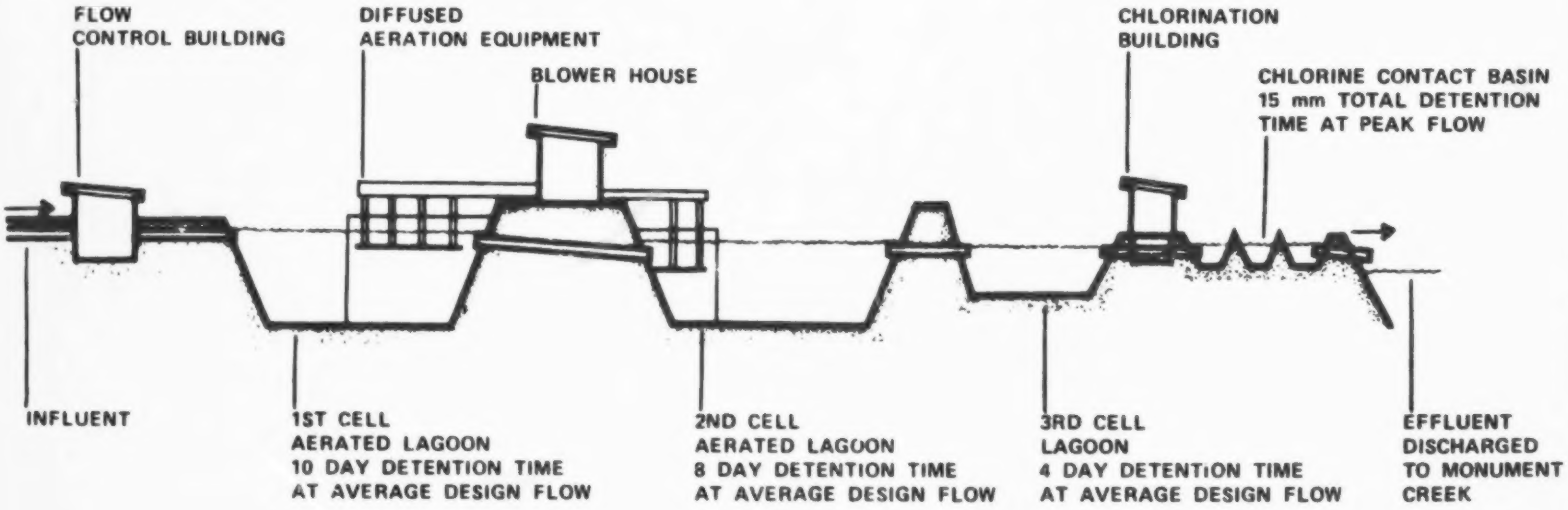
Population estimates from Table 2

Phased development of the treatment facility is advisable for financial reasons. A 10-year design period will provide treatment for approximately 7,000 people, an increase of 4,400 people. When this level is reached a greater financial base will be available for future expansion.

Three treatment systems have been evaluated: septic tank system, secondary treatment, and advanced waste water treatment. Septic tank drainage fields can provide effective treatment in areas of light development using wells. Five-acre lots are required; however, 2 1/2-acres is sufficient if a sewer system is available.

Secondary treatments systems considered are: conventional activated sludge plant and three cell lagoon system. The activated sludge process involved primary sedimentation, secondary aeration, final clarification, and effluent disinfection with chlorination. Initially, the plant could include only aeration and final clarification followed by chlorination. Later expansion could add primary clarification, expand aeration and final clarification, and add digestion capacity to the solids handling system. Some operational problems could be expected due to low initial flows. Construction and operational costs for the first phase are shown in Table 4.

The three cell lagoon system is the basis of the proposed project. First cell detention time would be 10 days at a design flow of 840,000 gallons per day. Second cell detention time would be a little over 8 days, and the final cell approximately 4 days. The effluent chlorination contact chamber detention time would be 15 minutes at peak flow, using gaseous chlorine or hypochloride solution as a disinfectant. The first and second lagoon cell would be aerated, with the first cell receiving most of the air. The final cell would be used as a polishing pond without aeration.



FLOW
CONTROL BUILDING
DIFFUSED
AERATION EQUIPMENT
BLOWER HOUSE
CHLORINATION
BUILDING
CHLORINE CONTACT BASIN
15 mm TOTAL DETENTION
TIME AT PEAK FLOW
INFLUENT
1ST CELL
AERATED LAGOON
10 DAY DETENTION TIME
AT AVERAGE DESIGN FLOW
2ND CELL
AERATED LAGOON
8 DAY DETENTION TIME
AT AVERAGE DESIGN FLOW
3RD CELL
LAGOON
4 DAY DETENTION TIME
AT AVERAGE DESIGN FLOW
EFFLUENT
DISCHARGED
TO MONUMENT
CREEK

PROPOSED LAGOON TREATMENT SYSTEM

FIGURE 8

TABLE 4

TREATMENT ALTERNATIVE COSTS

	Conventional Activated Sludge Waste Water Treatment Plant	Three-Cell Aerated Lagoon Waste Water Treatment Plant	Advance Waste Water Treatment Plant
Construction Cost	615,000	400,000	1,100,000
Contingency	62,000	40,000	110,000
Total Construction	677,000	440,000	1,210,000
Engineering & Legal	102,000	66,000	182,000
Subtotal	809,000	506,000	1,392,000
Land Required	7 acres	18 acres	15 acres
Land Cost @ $2,500/acre	17,500	45,000	37,500
Estimated Annual Operational Cost	40,000	25,000	120,000

The lagoon system should provide satisfactory treatment and meet stream discharge requirements for the initial design capacity of 7,000 persons. Expansion of the facility by adding more air to the second cell and changing from a series to a parallel flow pattern will produce an effluent which may not meet state standards in 1983 for BOD and SS. When sewage flows exceed one million gallons per day, a change in waste water treatment technology by the addition of mechanical treatment to reduce effluent suspended solids and BOD may be necessary. Additional lagoons could be constructed but this would require considerable land area.

Advanced waste water treatment would involve removal of nutrients such as phosphorus and nitrogen in addition to the carbonaceous BOD removal provided by systems outline above. An advanced waste water treatment cannot be justified on the basis of discharge requirements for Monument Creek. The AWT system is therefore presented here for comparative purposes only.

Table 4 presents construction, operation, and land costs for various treatment systems outlined above. Based on this and operational requirements, the three cell lagoon system with effluent disinfection is considered most appropriate for the project.

Sewer Service Areas

Areas presently sewered are shown in Figure 4. These collections systems constitute a major capital investment and are the basis for establishing future sewer service areas.

Areas platted in subdivisions of 2-1/2 to 5 acres for septic tank use are shown in Figure 6. It is unlikely that public sewerage systems will be necessary or desired by property owners where septic tank systems perform satisfactorily.

The regional land use plan designates areas south of Monument and Woodmoor in an Agricultural-Unused category. These are areas in which sewerage systems and urban residential densities are not intended. Five acre farm zones generally applied by the county to these areas conform to this land use policy but allow new homes with septic tanks to be built upon tracts five acres or more in size. These areas should be excluded from sewer service areas where possible.

Natural drainage patterns influence the feasibility of sewer service areas. Figure 3 shows that upper Monument Creek, including Dirty Women Creek and upper portions of Teachout Creek drain areas presently sewered. These drainage basins are naturally tributary to the existing Monument lagoon and to alternative treatment sites in this vicinity. However, a relatively small portion of these drainage basins has as yet been developed or provided with sewerage collections systems.

Based upon these considerations, a primary service area for Palmer Lake, Monument, and Woodmoor would include: all areas north of Hibgee Road in the Woodmoor area; all areas between Monument Creek and the I-25 Freeway in the Monument area; and portions of Palmer Lake which have development potential and could require sewerage. (Figure 5) The Elephant Rocks-Ben Lomand ridge in upper Palmer Lake is excluded because of the existing large lot platting, steep terrain, and water problems. Areas within the Palmer Lake Sanitation District west of Monument Creek are included.

It is assumed that existing collection systems have the capability to serve this area with appropriate minor modifications and additions. Service areas northeast of the rail lines in Palmer Lake will require new collection systems. Service areas southeast of Monument will require new transmission lines. Sewerlines for this area might be combined with a new gravity line from the south Woodmoor-Higbee Road pump station to the treatment facility.

The primary service area can be served by a facility at Site 1 without additional major trunklines. Site 2 is also a feasible location with construction of a new trunkline from Site 1 to Site 2. Site 2 could serve the southeast Monument-lower Woodmoor area by means of a new trunkline in Teachout Creek. This would also make possible the sewering of a secondary service area of some 600 acres drained by Teachout Creek. (Figure 5)

The Palmer Lake-Monument-Woodmoor primary service area has an estimated capacity of 25,000 persons based upon platted lots and probable development densities. The secondary lower Teachout Creek service area tributary to Site 2 has an estimated capacity of an additional 4,000 to 5,000 persons depending upon residential densities.

At present the primary service area includes approximately 3,000 persons of which some 2,600 would be served by sewers within the three sanitation districts. This population is expected to increase to some 12,000 persons by 1990. Ample capacity, therefore, exists within the primary service area for anticipated new development.

For reasons of economy and to encourage conditions suitable for full urban services new subdivisions occurring within the service areas should be at densities appropriate for sewer systems and no new home sites should be established which are intended for septic tank use.

Solids Handling and Sludge Disposal

The proposed lagoons will have ample depth for accumulation and storage of waste water solids. In normal operation the rate of solids build-up within lagoons will require sludge removal at infrequent intervals, probably not more often than once every 10 years. Provisions should be made in the design of the lagoons for the removal of the accumulated solids. During the short period of time required for sludge removal some additional odor and aesthetic problems will exist at the site.

Sludge probably will be removed to a location outside of the district and combined with municipal refuge for disposal in a sanitary landfill. An alternate method of sludge disposal is soil incorporation in an agricultural area. Disposal sites and methods should be integrated with a general program for solid waste disposal in the Colorado Springs region to minimize environmental impact.

Alternative Treatment Systems and Sites

The following analysis is based upon a three cell lagoon treatment system shown in Figure 8. The first cell will have a detention time of at least 10 days and a depth of between 10 to 15 feet. The second cell will have a detention time of at least 8 days and a depth of between 10 and 15 feet. The first and second cells will be aerated by a diffused aeration system which will also induce a circular movement within the lagoon. The treatment systems will have a design capacity of between 7,000 and 7,500 people. Effluent disinfection will be accomplished by chlorination utilizing gaseous chlorine or hypochloride solution. A chlorine contact basin will be provided with a detention time of at least 15 minutes at peak flow.

Some locations will require a pump station to lift waste from the interceptor to the treatment facility. The pump station will have at least two pumps in a dry pit, and could consist of a factory built, below grade pump station or a built in place station with an above grade pump house.

Alternative Sites

In addition to the existing Monument lagoon, a number of alternative sites were evaluated as locations for treatment facilities. The following criteria were paramount in the site selection process.

1. Sites which would permit the Palmer Lake, Monument, and Woodmoor districts to have separate treatment systems within their own borders. Site 1 would continue to be used by Monument. Site 4 was selected because it is at the lowest point on Monument Creek within the Palmer Lake Sanitation District, and is in a relatively undeveloped area. Site 5 is on Dirty Woman Creek as close as possible to Woodmoor where sufficient land for the facility is available.

2. A site in the vicinity of Site 1 which would serve essentially the same combined Palmer Lake-Monument-Woodmoor service area, but which would not have its immediate adverse social and aesthetic impact. Site 2 meets this criteria. This area was considered as a site for the original Monument lagoon.

3. A site on Monument Creek near the Air Force Academy which would permit undeveloped land south of Monument and Woodmoor to be sewered. Site 3 meets this criteria.

The sites selected were determined to be the most feasible locations meeting these criteria. Facility locations are approximate only, as detailed examination of potential site characteristics and limitations was not possible. The sites nevertheless are representative of the environmental and social impacts which are to be found in these locations and are sufficiently precise for purposes of this environmental assessment.

Alternative Systems Analyses

Alternate A: Proposed Project. This involves construction of the above treatment system at Site 1 by adding two new lagoons ahead of the existing Monument lagoon which will serve as a polishing pond. This alternate does not involve any modifictions to the existing collection system and is the project for which EPA funding has been approved.

Alternate B: New Location, Teachout Creek. This alternative explores the environmental implications of a new joint disposal facility at Site 2 on Monument Creek at the mouth of Teachout Creek. This site is approximately 1/2 mile downstream from the existing Monument lagoon. It would serve essentially the same area as Alternate A but would require the construction of a new interceptor from Site 1 to Site 2. Monument lagoon would be abandoned.

Alternate C: New Location, Near Air Force Academy. This alternate examines the implications of a joint treatment facility at Site 3 on Monument Creek just north of the Air Force Academy boundary. This site is approximately 2 miles downstream from Site 1 and would require the construction of approximately 2 miles of interceptor to transmit waste water from the existing Monument lagoon to Site 3. Monument

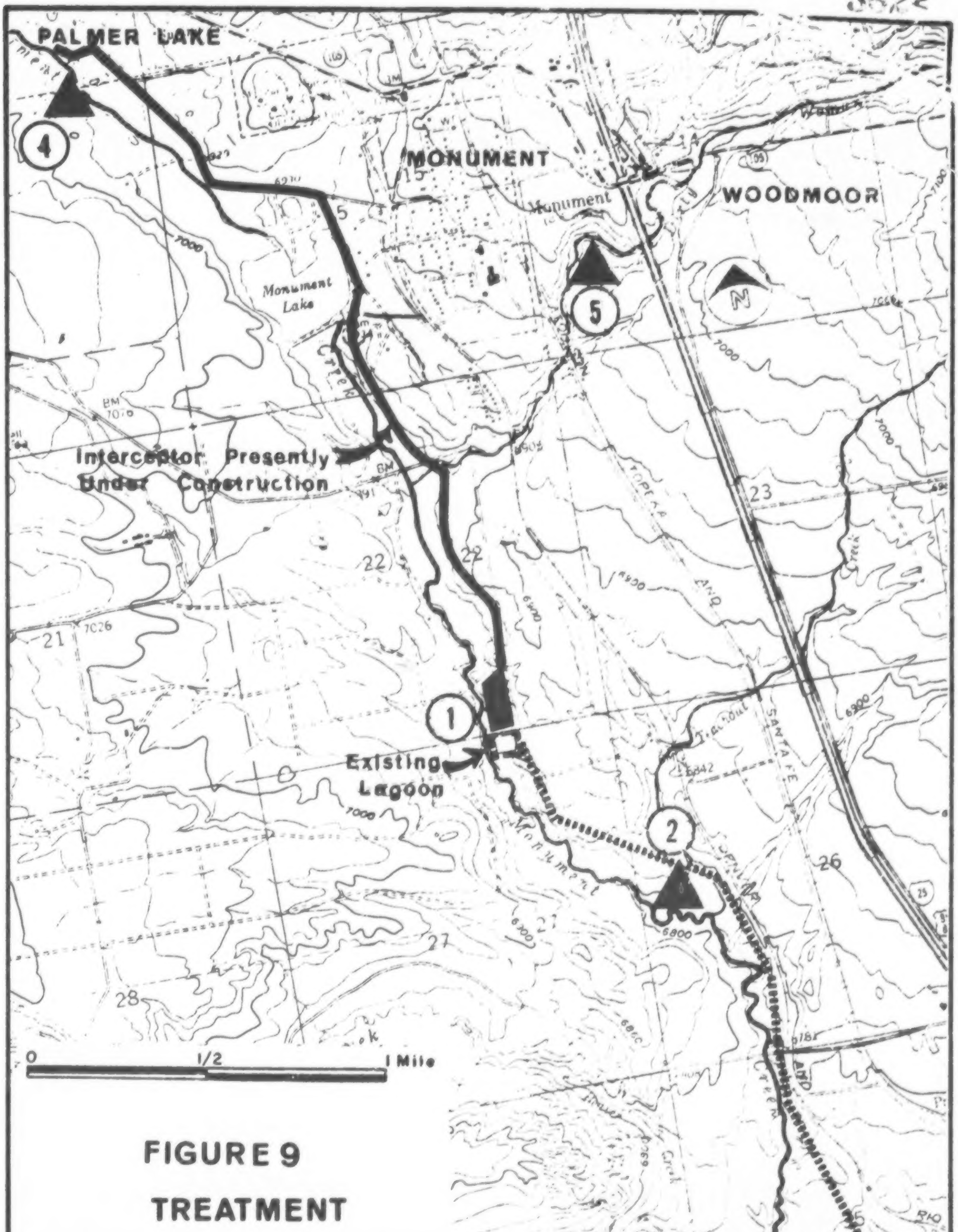

PALMER LAKE
MONUMENT
WOODMOOR
Monument Lake
Monument
Interceptor Presently Under Construction
Existing Lagoon
Monument Creek
N
1
2
3
4
5
0
1/2
1 Mile

FIGURE 9
TREATMENT
SITE ALTERNATIVES

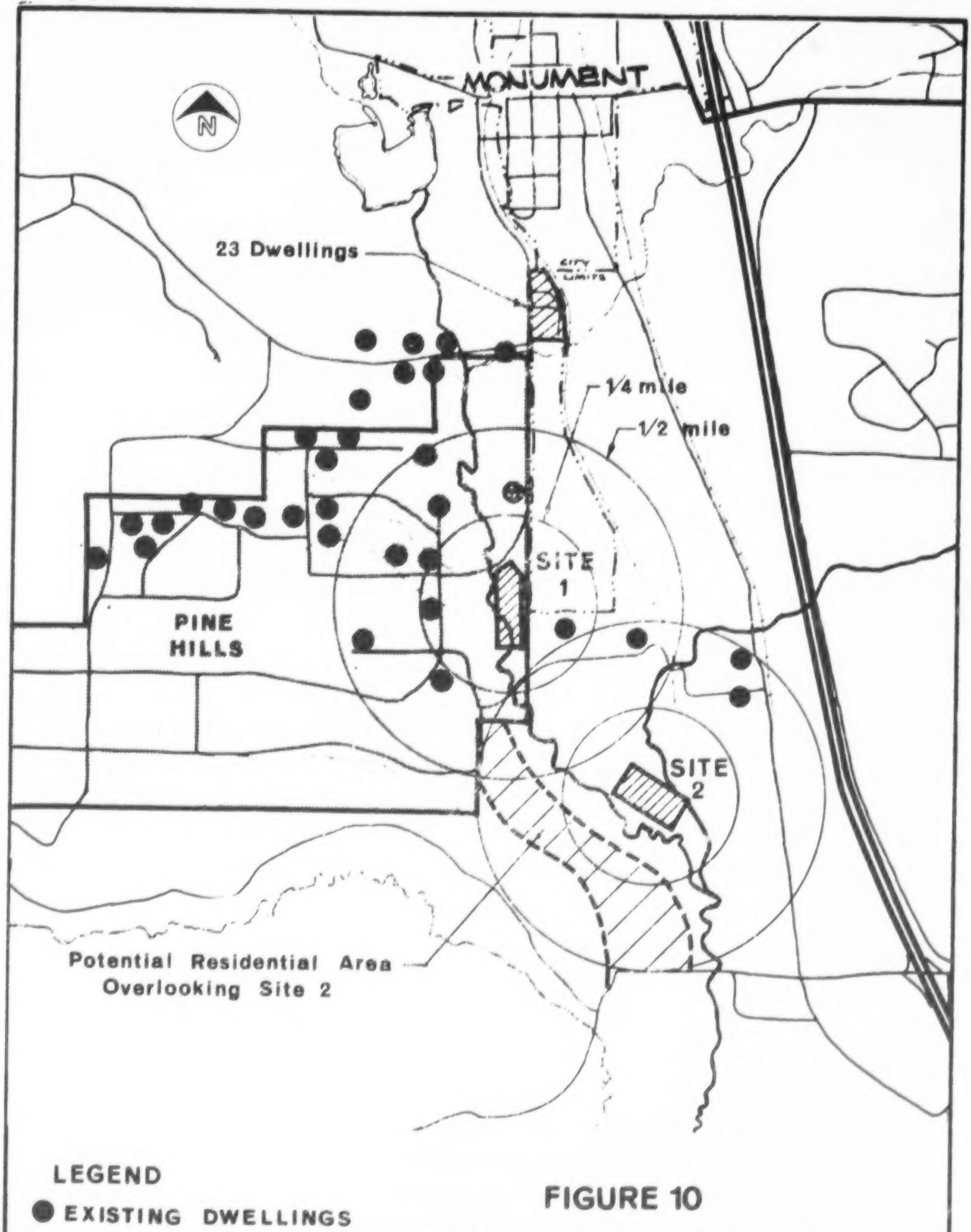

MONUMENT
N
23 Dwellings
City Limits
1/4 mile
1/2 mile
SITE 1
PINE HILLS
SITE 2
Potential Residential Area Overlooking Site 2
LEGEND
● EXISTING DWELLINGS

FIGURE 10

RESIDENTIAL IMPACT
SITE 1 & SITE 2

lagoon would be abandoned. This alternate does not meet objectives of local land use plans.

Alternate D: Separate Facilities. This alternate explores the feasibility of separate waste treatment facilities for each of the three districts. Site 4 would be the site for a Palmer Lake facility adjacent to Monument Creek at the south boundary of the Palmer Lake sanitation district. A pump station would be required to lift waste from the recently installed interceptor to the treatment facility. An outfall line would carry effluent from the facility via the existing interceptor to a Monument Creek discharge below Monument Lake.

Treatment for the Woodmoor Sanitation District would take place at Site 5 adjacent to Dirty Woman Creek between I-25 and the Railroad lines. An outfall line would carry effluent from Site 5 to Monument Creek. The existing Monument lagoon at Site 1 would continue to serve the town of Monument.

Alternate E: Separate Facility for Palmer Lake; Combined Facility for Monument and Woodmoor. This alternate would involve a separate facility at Site 4 for Palmer Lake as in Alternate D, and an expanded treatment facility at Site 1 for Monument and Woodmoor.

Alternatives D and E do not meet objective 3 relating to a combined treatment facility.

Evaluation of Alternatives. Alternate C is unsuitable because of cost and its tendency to induce growth in new areas in violation of area land use planning. It would have a low impact on the human environment and a moderate to high impact on the natural environment.

Alternate D, three separate facilities, was eliminated due to high cost, and high impact upon the natural and human environment. This alternative would not add new service areas. Minor modifications to the collection system would be required to transmit effluent from Palmer Lake and Woodmoor treatment sites to Monument Creek.

Alternate E was eliminated due to high impact upon the natural and human environment and high cost. Minor modifications to the existing collection system would be required to transmit effluent from Site 4 to Monument Creek below Monument Lake.

Alternatives A and B: Comparisons. Alternatives C, D, and E were eliminated for reasons given above. Alternatives A and B have characteristics which make them somewhat equally acceptable. The relative advantages and disadvantages of each alternate are briefly summarized below for comparison purposes. (Figure 10)

Alternate A: Advantages

1. Site 1 is now a dumping ground which will be difficult to control or eliminate. The project provides an opportunity to clean up a community eyesore.

2. Site 1 is somewhat closer to Woodmoor, making it easier to pump effluent to the golf course for land disposal if this proves feasible in the future.

3. The impact of the existing Monument lagoon upon the natural environment already exists. It would be preferable for this impact to continue at its present location than to have it transferred to a place which is now in an undisturbed condition.(26)

4. The artificially created marsh below existing lagoon has proven to be a beneficial natural habitat which should not be disturbed.

5. Good road access exists directly to the site.

6. Urban residential densities will be confined more closely to areas designated for development in the land use plan.

7. Future growth and land use planning is uncertain and a pending water quality management plan may establish new schemes for meeting regional needs. Alternate A is an economical interim solution which can be abandoned if future needs and plans change.

Alternate A: Disadvantages

1. The Pine Hills subdivision overlooks the site. Its developer, lot owners, and those who have built homes here feel that the expansion of the original lagoon is an unwarranted and possibly illegal intrusion in a residential area.

2. The appearance and possible noise and odor of treatment facility will be objectionable to existing homes nearby.

3. Site 1 has a known flood hazard. Due to uncertainties concerning future flood levels, possibility exists the lagoon could wash out.

4. The size of Site 1 is restricted by topography and Monument Creek. Its capability for expansion to meet future population growth needs is therefore limited. The

capability of the plant to meet standards beyond its initial 7,000 population design is also questionable. Because the investment in the existing lagoon is not great, abandonment now would represent a smaller loss than after expansion had taken place.

5. Expansion of lagoon will tend to make the facility permanent. A major investment now will make future abandonment difficult and less likely.

Alternate B: Advantages

1. At Site 2 sufficient land is available for future plant expansion, flexibility in plant design and alterations, and for buffers around facility. The location is therefore suitable for both interim and long term needs.

2. Site can be sufficiently removed from Monument Creek to minimize flood problems and distrubance to stream.

3. Little existing platting or dwellings in vicinity of site. Initial residential impact will be minimized.

4. Location at mouth of Teachout Creek will make possible the servicing of some 600 additional acres for residential development in south Monument and Woodmoor areas, and elimination of a pump station on Higbee Road.

Alternate B: Disadvantages

1. No access exists to site 2. A new road must be acquired and built.

2. Additional cost to project for removal of old lagoon and restoration of Monument Creek at Site 2.

3. Facility will induce residential development in vicinity. These residents will experience impact. Facility will be visible from many lots in Pine Hills and in prominent view from potential residential land which overlooks site from other side of Monument Creek.

4. If land use plans change to allow urban development south to the Air Force Academy, Site 2 will be unsatisfactory because not low enough on Monument Creek.

5. Area is a natural habitat in relatively undisturbed condition. Facility would upset this and induce development in area, further reducing habitat.

6. Alternate B is a new facility whose costs must be shared by Palmer Lake with Monument and Woodmoor, since the old Monument lagoon would be abandoned. Overcoming the financial and political difficulties of a joint enterprise would further delay realization of the project, and failure to reach agreement could result in separate, more expensive facilities. Delays are critical because of Palmer Lake septic tank failures and overloaded Monument lagoon.

7. Site 2 has not been investigated for construction feasibility. Time required for engineering, design, land aquisition, and new funding arrangements would also delay project and increase costs.

8. Alternate B is estimated to cost $723,000 which is nearly 50% more than Alternate A, $488,000. The local costs are estimated to be $214,000 which is approximately 60% greater than for Alternate A, $135,000.

Cost Estimates. Table 5 presents cost estimates for the alternative treatment systems. Construction costs were adjusted for the proposed project to reflect the average of three low bids obtained earlier in the year. Included are 10% for contingencies and 15% for engineering and legal costs. Land costs were obtained from Norman Bodinger, a local developer with good knowledge of the area. Estimates are based upon expected 1975 costs. Estimates for other Legal and Engineering Fees includes costs to rebid alternate A, engineering cost for the proposed project should other alternatives be selected, and the estimated cost of the environmental assessment.

Grants were estimated to be 75% of the total project cost less land cost. The capital recovery estimate includes 7% interest and a 20-year amortization. The operating costs are based on a fully-loaded plant operating in 1975. Initial operation may be somewhat lower than estimated, depending upon chemicals and power required. Total annual cost includes the cost of capital recovery, and the operation of the treatment plant and pump station.

CENTRALIZED VS. DECENTRALIZED ALTERNATIVES

Alternatives A, D, and E will treat waste water from the existing Palmer Lake-Monument-Woodmoor districts and adjoining areas at a central or separate facilities. Each of the alternatives would have essentially the same effect in centralizing land use and development since they will permit and encourage growth and urbanization within the primary service area encompassing the three districts. (Figure 5)

TABLE 5

PROJECT ALTERNATIVES COMPARATIVE COSTS

ITEM	Alternative A	Alternative B	Alternative C	Alternative D Palmer Lake	Alternative D Monument	Alternative D Woodmoor	Alternative D Total	Alternative E Palmer Lake	Alternative E Monument & Woodmoor	Alternative E Total
Treatment Site	No. 1	No. 2	No. 3	No. 4	No. 1	No. 5		No. 4	No. 1	
Treatment Capacity Population Flow mgd	$ 7,500 0.9	$ 7,500 0.9	$ 7,500 0.9	$ 1,825 0.27	$ 1,075 0.12	$ 4,625 0.56	$ 7,525 0.9	$ 1,825 0.22	$ 5,700 0.68	$ 7,525 0.9
Treatment Plant Cost	352,000	420,000	430,000	170,000	150,000	292,000	612,000	170,000	256,000	426,000
Pump Stations			190,000	44,000			44,000	44,000		44,000
Interceptors		80,000	320,000	15,000		50,000	65,000	15,000		15,000
Contingency	35,000	50,000	94,000	23,000	15,000	29,000	67,000	23,000	26,000	49,000
Total Construction	387,000	550,000	1,034,000	252,000	165,000	371,000	738,000	251,000	282,000	534,000
Engineering & Legal	58,000	83,000	155,000	38,000	25,000	48,000	111,000	38,000	42,000	80,000
Subtotal	445,000	633,000	1,189,000	290,000	190,000	369,000	849,000	290,000	324,000	614,000
Land Cost	18,000	45,000	45,000	10,500		40,000	50,500	10,500	12,000	22,500
Other Engineer & Legal	10,000	30,000	30,000	10,000	10,000	10,000	30,000	15,000	15,000	30,000
Environmental Statement	15,000	15,000	15,000	5,000	5,000	5,000	15,000	7,500	7,500	15,000
Total	488,000	723,000	1,279,000	315,500	205,000	424,000	944,500	323,000	358,500	681,500
State & Federal Grants	353,000	509,000	926,000	229,000	154,000	288,000	671,000	234,000	260,000	494,000
Local Cost	135,000	214,000	353,000	6.500	51,000	136,000	273,500	89,000	98,500	187,500
Capital Recovery	13,000	20,200	33,300	8,200	4,800	12,900	25,900	8,400	9,300	17,700
Treatment Operation	25,000	25,000	25,000	12,600	11,900	17,200	41,700	12,600	21,300	33,900
Pump Station Operation			10,000	6,000			6,000	6,000		6,000
Total Local Annual Cost	38,000	45,200	68,300	26,800	16,700	30,100	73,600	27,000	30,600	57,600

Although Alternatives B and C also serve Palmer Lake-Monument-Woodmoor, their downstream locations would make possible development and urbanization of areas not otherwise feasible for urban densities. They would therefore tend to induce a spread or expansion of growth along the I-25 corridor toward Colorado Springs.

Alternate B would facilitate urban development of properties within Teachout Creek drainage south of Higbee Road. Portions of Beaver Creek could also possibly be served by pumping. Alternate C would permit and encourage urban development in Teachout, Jackson, Beaver, and Hay Creeks.

Since ample lots for urban building are already available in the Palmer Lake-Monument-Woodmoor service area, the availability of sewers outside this area would probably not increase the general rate of development appreciably but would induce it to spread over a wider area.

An estimated 1990 population of 13,000 persons which would otherwise be distributed within an area with an estimated capacity of at least 25,000 persons would, if downstream sites were built, be distributed in an area having a much greater overall capacity.

Commercial and industrial development would also probably tend to be distributed more widely, rather than concentrated within the Palmer Lake-Mounument-Woodmoor communities. Sewerage of areas south of Monument and Woodmoor would be accompanied by an expansion of the City of Monument and the Woodmoor Water and Sanitation District or by the establishment of new sanitation districts.

Separate facilities for the three districts, as in alternatives D and E, would not tend to disperse development. However, the two or three sites would spread the environmental impact of treatment facilities over a wider area and result in diseconomies in construction, operation, and maintenance. A central facility would be flexible and capable of meeting growth needs throughout the area.

Selected Alternative

Based upon the factors set forth in this chapter, Alternative A is recommended as most satisfactorily meeting the objectives for the project.

III DESCRIPTION, PROPOSED TREATMENT FACILITIES

Interceptor Sewers

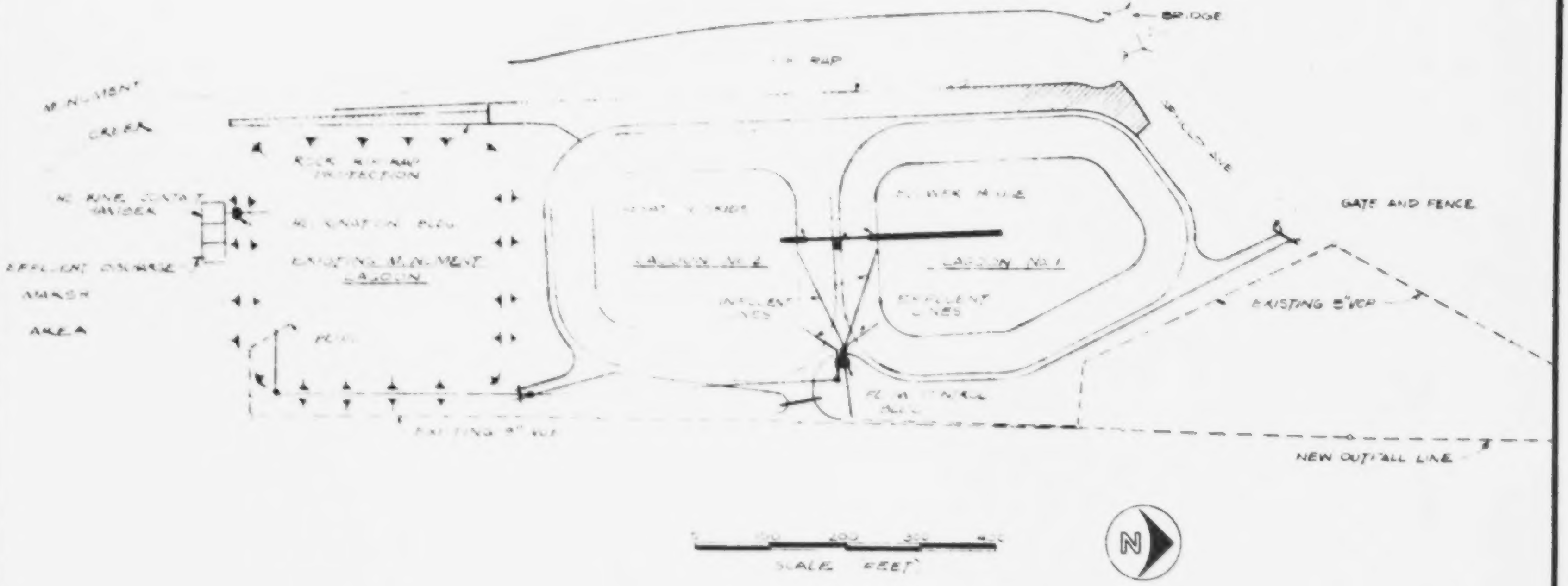
The collection and interceptor system for the proposed project will be the same as the existing system shown on Figure 4. Additional interceptors and collection systems would be provided only in the primary service area shown on Figure 5. An area-wide sewerage plan should be developed for proper sizing of interceptors and collection systems in the joint service area.

Treatment Plant

The process of the proposed treatment system consists of a three cell aerated lagoon facility. (Figures 8, 11) The first cell, which would be aerated, will have a liquid depth of 14 feet and a detention time at design flow of 10 days. The second cell, also aerated, will have a detention time of 8 days at design flow. The third cell is the existing Monument lagoon and will serve as a polishing pond with a detention time of approximately 4 days. Effluent disinfection will be accomplished by addition of gaseous chlorine or hyperchloride solution. The chlorine contact chambers will have a detention time of 15 minutes at expected peak hourly flow.

Each basin will be earthen, sealed with a high expansive clay such as bentonite. Interconnecting piping will allow the first and second cells to operate in series or parallel, discharging into the third cell, existing Monument lagoon.

This system will provide adequate treatment for a population of between 7,000 and 7,500, which is approximately three


MONUMENT
CREEK
ROCK RIP RAP
PROTECTION
CHLORINE CONTACT
CHAMBER
EFFLUENT DISCHARGE
MARSH
AREA
EXISTING MONUMENT
LAGOON
EXISTING 8" VCP
RIP RAP
BRIDGE
LAGOON NO 2
LAGOON NO 1
INFLUENT
LINES
EFFLUENT
LINES
FLOW CONTROL
BLDG
GATE AND FENCE
EXISTING 8" VCP
NEW OUTFALL LINE
0
100
200
300
400
SCALE FEET
N

PROPOSED TREATMENT FACILITY
SITE PLAN

FIGURE 11

times the initial using population. Expansion of this treatment facility beyond its initial design capacity so as to meet expected higher effluent standards could be difficult. Little land is available for construction of additional lagoons, however, new technology is presently being developed which may aid in improving lagoon effluent quality.

Effluent Disposal

Effluent will be discharged into the existing marsh south of the present Monument lagoon and thence into Monument Creek. Chlorine monitoring equipment should be installed to prevent excessive levels of chlorine from being discharged into the marsh. Experience may show that chlorine removal procedures will be necessary to protect the existing marsh.

Sludge Disposal

Lagoon cells will be deep enough for adequate sludge storage and digestion. Provision should be made for cleaning of the proposed facilities with minimum disruption to the treatment process. The frequency of cleaning will depend upon the rate of growth in the service area and will probably be on the order of once every 10 to 15 years. Methods for disposal of accumulated sludge should be consistent with area-wide solid waste management.

Discussion

The proposed lagoon treatment system is highly reliable. Blowers and chlorination equipment are the only mechanical equipment required. A failure of blowers would result in increased pollution load to Monument Creek if down time is excessive. Effluent disinfection system failure will not significantly increase the pollutional load.

Flooding of Monument Creek could cause a treatment process failure. Care must be taken that construction along the stream does not result in overflow or wash out of lagoons. A flood flow of 20,000 cfs in Monument Creek adjacent to the proposed site is believed adequate for design purposes, but a detailed flood hazard study has not been made.

Operation of the proposed treatment facility will require one man full time, with some additional supervisory help. The expected annual operation and maintenance cost at design flow is approximately $25,000 per year including labor and materials. Expected project costs are shown in Table 5, Alternate A.

A regional water quality management plan is presently being prepared by the Pike's Peak Area Council of Governments. Preliminary results of this plan are not available and compliance of the proposed facilities with this plan cannot be determined.

IV ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

In this chapter the environmental effects of Treatment System A will be evaluated.

Effluent Effects

Treatment system effluent will be introduced into Monument Creek through the small marsh, as at present. Effluent quality will be much improved and will meet current water quality discharge standards. It is expected that during periods of low flow, effluent discharge may exceed streamflow. Stream profiles are generally steep enough to afford good effluent dispersal, minimizing possibilities for local ponding and eutrofication.

Below the existing Monument lagoon is a marsh created when repairs were made to the lagoon after the 1965 flood. The marsh has acquired value as an aquatic habitat and should be retained. Studies should be made to insure that future lagoon effluent at this point does not create unnecessary aesthetic or health problems, and does not disrupt marsh life. Chlorination of effluent can also be detrimental to stream life and should be carefully monitored.

Upgrading the quality of effluent discharged into Monument Creek will make possible greater recreational use of the stream environment. Monument Creek is not used for swimming or contact recreation except at Monument Lake. Effluent discharge is 1-1/2 miles below Monument Lake. The discharge should not unduly affect the use of the creek as a planned open space corridor including trails.

Improved effluent quality will have a beneficial effect upon biological communities dependent upon the stream. Monument

Creek is a poor, warm-water fishery, comprised primarily of dace, creek chub, and suckers. These should not be adversely affected by the effluent quality. The facility site was judged by environmental consultants to have less ecological impact than any site considered.

Construction effects of the effluent system will be minor, and associated with the construction of the lagoon facility. Overload or failure of the effluent system is unlikely during the construction period as the existing lagoon will continue in use.

Solids Handling and Disposal

Lagoon depths will be ample for accumulation and storage of waste water solids. Removal and disposal will probably not be required more often than once in 10 years. When solids removal occurs additional odors can be expected. Project plans do not include provision for sludge removal and disposal. This should be accomplished in conformance with area-wide solid waste disposal programs, probably in a sanitary landfill or through soil incorporation in an agricultural area.

Treatment Facility Effects

The project and its location is consistent with land use planning and zoning. Area land use and facility plans have been based upon the treatment of waste water at this location and upon urbanization of the area which sewers will serve.

Winds in the area are highly variable and subject to local topographic conditions including the adjacent Rampart Range. Odors, therefore, should not tend to concentrate in any particular area. When operating properly within design limits, the characteristic stale or musky odor of the treatment system should not be noticeable except in the immediate vicinity. Ice removal from the lagoon can increase odor emission, but this is usually minimized by the aeration system.

The site is just outside the south boundary of the City of Monument. It is situated on the east bank of Monument Creek, and on the easterly boundary of Pine Hills, a subdivision of 5-acre lots. Most of Pine Hills and its occupied home sites are west of Monument Creek. (Figure 10)

Pine Hills deed restrictions limit development to residential uses. The regional land use plan shows Pine Hills in a residential classification at densities of one to four persons per acre. County zoning is A-4 and A-5, farming, which permits dwellings on 5-acre parcels. The zoning ordinance does not specifically require Location Approval for sewage disposal facilities. County planning staff, however, interpret the ordinance as requiring Location Approval for the proposed facility. This procedure is designed to permit special consideration to be given to 18 types of nonresidential uses such as fire stations, school, church, and other public facilities which are necessary for residential development but which can have an impact upon them.

Fifty Pine Hills home sites exist within 1/2 mile of the facility. Within this radius, eight dwellings have been built in Pine Hills west of Monument Creek overlooking the site. These residents will also be exposed to the facility when using Arnold Avenue which is the main access to the Pine Hills development. Two dwellings on unplatted farmland southeast of the facility are within

1/2 mile distance. These residents have participated in efforts to oppose the proposed project. (Figure 10)

East of Mitchell Avenue in the vicinity of the site is a relatively flat, vacant, buildable area recently annexed to the City of Monument. This land is some 40 feet higher than the facility and because of the sharp change in grade along Monument Creek, does not overlook the site. Less visual impact exists for dwellings in this area than for dwellings west of Monument Creek which overlook the stream. Approximately 1/4 mile north, just east o Mitchell Avenue, is the Silver Hills Subdivision. No dwellings have been constructed here as yet, but the project would have some impact on future residents.

The vicinity of the existing Monument lagoon is a detriment to its residential surroundings. The riverbank is a dumping ground for junk, and the old lagoon dike has been stabilized with wrecked cars. A beneficial effect of the proposed project will be that the area will be cleaned up, regraded, seeded, and riprapped.

Because the site is in the flood plain, it is not suitable for farming or development. Therefore, its use for a sewage lagoon does not eliminate other use. The facility site has no known historic or archeologic interest or value. No residences exist on or adjacent to the site. The portion of the site occupied by the existing lagoon is owned by the Monument Sanitation District. Steps have been taken to acquire two additional parcels for the enlarged facility.

Available flood information for Monument Creek is given in the background section on hydrology. Since the existing Monument lagoon had to be rebuilt following a flood in 1965, the site is obviously within the flood plain of Monument Creek. The flood also washed out the bridge just upstream from the lagoon. Concern has been expressed by local officials that the proposed project would not be invulnerable to a future flood; that the stream side dike slope of 1-1/2 to 1 is too steep; that riprap would not withstand flooding; and that a health hazard exists from the possibility of submergence or failure of the lagoon during flooding.

Project engineers have used a design flow of 20,000 cfs for Monument Creek in the design of the lagoon dike and riprap, based upon consulation with the Corps of Engineers. Since the Corps has not made a formal flood plain study of this section of Monument Creek, the affect of the proposed project on flood potential and the hazard to the project from future flooding is uncertain.

PPACG plans call for retaining Monument Creek as an open space link or corridor. (Figure 7) This is intended to connect local parks with the National Forest; provide footpaths, bridle paths, and bikeways; and serve as a buffer zone in developing urban areas. The treatment facility would constitute an intrusion into this open space corridor, and would conflict with its intended natural character.

Construction Effects. The facility site is in an area of low population concentration and traffic volumes. Construction activities are not expected to interfere only temporarily with local traffic movements. Truck traffic to the construction site will increase the level of noise and dust associated with local road use to some degree.

Considerable excavation and earthmoving will be required for lagoon dike construction. Land exposed by excavation will have greater susceptibility to erosion by wind and rain than undisturbed areas. Blowing dust and some siltation of drainageways are to be expected until topsoil has been restored, although grass and vegetation is sparse even in natural, undisturbed areas. Specifications call for seeding of lagoon site within the surrounding fence. Riprapping will stabilize the streamside of lagoons.

Specifications call for earth and organic material to be stripped from the site prior to construction. This may be used as topsoil or wasted as directed by the Project Engineer. Where soil removed would stabilize the finished site and speed vegetation, it should be used as topsoil.

During construction the project will be a source of equipment noise, and night lighting, and will have an appearance characteristic of such activities. These temporary effects will disturb the generally quiet character of this area and will be obvious to residents overlooking the site from the west.

The existing lagoon will remain in use during construction so that shutdown or bypass of sewage will not occur.

Operational Effects

Odor. During operation the lagoon will be a source of odors from aerosol and gasses characteristic of the treatment process. When operating properly within design capacities these odors are not usually noticeable except in the immediate vicinity of the facility. The possibility of significant odors is potentially greater after periods of freezing weather. Odor problems of the existing Monument lagoon, which residents say are most noticeable in spring and fall, are undoubtedly due

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to overloading. No special measures are contemplated in the proposed project to mask or suppress emission of odors

Noise. Plant operation will include use of a blower to force air into the lagoon for aeration purposes. The blower is a 75 hp, single-stage centrifugal compressor which will be housed in a concrete structure between the lagoons. Air will be delivered through a metal duct supported above the water level to diffusers below the surface of the lagoon. Facility plans have not included provision for noise suppression.

Noise has both psychological and physiological effects upon people, and these vary with individuals, setting, and the characteristics and intensity of the noise. A recognized standard for noise measurement is the sound level indicated by an A-weighted filtering network, in units of dBA. This has been utilized by the State of Colorado to establish acceptable maximum noise levels for human activities, as follows:

SOUND LEVEL IN dBA

Zone	7 a.m. - 7 p.m.	7 p.m. - 7 a.m.
Residential	55	50
Commercial	60	55
Light Industrial	70	65
Regular Industrial	80	75

It is estimated that the noise level of the blower will be 81 dBA at 100 feet. Because the dBA scale is logarithmic a 3 dBA change is a 100% change in energy, but subjectively a 10 dBA increase is judged to be a doubling of noise. Consquently, an 80 dBA noise level would seem eight times noisier than a 50 dBA level. Blower noise, therefore, greatly exceeds the acceptable 50 dBA level and will cause impact for any residence within 4,800 feet of the facility. It is recommended that measures be taken to muffle the noise arising at the aeration blower building so that noise levels do not exceed Colorado Revised Statute levels cited above.

Appearance. The lagoon facility will consists of three ponds approximately 7 acres in area surrounded by an artificial berm or dike. The top of the berm will be 18 feet above the bottom of the pond. Its height above the outside natural terrain varies with site topography. Rock riprap will be applied to the outer face of the berm to prevent erosion or flood damage.

Three flat roofed, concrete structures are required: a flow control building approximately 13 feet square and 6 feet high between the large lagoons along the influent side; an aeration blower building approximately 8 feet square and 8 feet high on the dike between the main lagoons; a chlorination building approximately 8 feet square and 8 feet high on the dike of the finishing pond; three shallow chlorine contact ponds at grade below the polishing lagoon, covering an area approximately 30 feet by 80 feet in size. The top of berms will be 10 feet in width and will be surrounded on the outside by a chain link fence.

Sewer Service Area Effects

A primary beneficial effect of the facility will be the elimination of a serious surface water pollution problem in the City of Palmer Lake and the equally serious stream pollution created by existing Monument lagoon. The sewerage system will have minimal effect upon automobile traffic within the communities.

Although places of historic and archeologic interest exist in the general area, facilities will have no adverse direct effect upon them. However, development indirectly made possible by the project could adversely effect them unless attention is given to their preservation.

The sewering of Palmer Lake should improve prospects for development and growth in the city, which has been inhibited by septic tank problems in the past. Large vacant areas in and adjacent to the city can accommodate such growth. Inducement of growth will increase the need for other public services and facilities as well.

The project will permit the City of Monument to expand and provide sewerage for areas southeast of the city where there has been recent interest in development. Municipal water supplies appear adequate to meet the increased demand for water which will result from induced growth.

Vacant, rural areas into which sewer service is extended or made possible by the proposed facility will probably experience an increase in land value. The resulting higher tax burden could have the effect of making farming less economic. Although increased taxable values will result for local governmental units, new tax revenues may not be adequate to keep pace with the rising costs of providing full services.

The continuing growth and development which the project makes possible will decrease somewhat the original natural and scenic beauty of this part of El Paso County. This effect will be lessened to the extent that the project tends to attract new development into defined and limited urban areas. The sewerage system will make possible development at much higher densities than for septic tank use. This will preserve a greater amount of open country for farming, wildlife, and general enjoyment. Without sewers, development will tend to be much more widly scattered and wasteful of land and natural resources. Greater urbanization will increase automobile use and which will have an adverse effect upon local air quality.

V UNAVOIDABLE ADVERSE IMPACTS AND MITIGATIVE MEASURES

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Natural Environment

1. The facility will perpetuate effects of the existing Monument lagoon as an intrusion in a formerly natural area. Use of the construction site as a dump has already detracted from its natural character.

2. The existing channel of Monument Creek will be altered. Due to site limitations, the west side lagoon dike will be partly within the channel. This could accelerate bank erosion and increase flood potential. The dike will be riprapped for stabilization, and the west bank excavated to increase channel capacity. Slopes along the east side of lagoons will be excavated. Every effort should be made to save existing pine trees. Native shrubs and trees removed in these operations should be replaced with indigenous plant materials. If more precise information on the flood plain is developed by the Corps of Engineers, the adequacy of the project to withstand flooding should be reevaluated.

3. During dry periods effluent may constitute a major portion of streamflow. Because Monument Creek has been polluted by failure of septic tanks and cesspools in Palmer Lake and by overloading of existing Monument lagoon, the project should improve stream quality.

Biological Environment

1. The treatment facility will result in some displacement of wildlife and impact upon aquatic biota. Environmental consultants recommend the site over alternatives because an environmental impact already exists at the Monument lagoon, while other sites are in relatively undisturbed areas.

2. The artifically created marsh below the existing Monument lagoon has become a valuable stream habitat. This could be disrupted or destroyed by the lagoon expansion project and measures should be taken to retain the marsh in its present condition. Excess fill material should not be disposed of in the marsh, as called for in project specifications. Effluent chlorination must be controlled to avoid destruction of marsh aquatic life.

3. During construction of the treatment system and sewer systems, some natural vegetation will be destroyed and wildlife displaced. These effects should be temporary.

Socioeconomic Environment

1. Residential areas in the vicinity, and particularly west of Monument Creek will be subject to adverse visual and aesthetic impacts. These areas are already effected by the existing Monument lagoon and dumping of rubbish and cars on the facility site. The new lagoon facility will be larger and higher than the existing lagoon, making it more apparent to homes which overlook the site. Its nearness to Arnold Avenue will also make it more obvious to passersby. Landscape planting and underground sprinkling should be installed around the site to prevent

erosion, screen the project from adjacent residential areas, and make it more compatible with its surroundings. Structures should be painted to blend with the environment.

2. The aeration blower of the facility will have an estimated noise level of 81 dBA. This is greatly in excess of the 50 dBA permitted by Colorado code for residential areas. Project plans make no provision for noise reduction. It is recommended that noise suppression be incorporated in project designs to meet the 50 dBA standard.

3. Project construction will produce noise and dust temporarily, which will have some effect on residences in the vicinity.

4. The treatment process will produce odors which will be more prevalent during ice thaw in spring. When the plant is operating properly within design capacity, odors will usually be noticable only in the immediate vicinity. Measures to suppress odors are not contemplated.

5. The project will make possible and tend to encourage a greater density and concentration of urban residential development. This is in conformance with the local land use planning and zoning. It will have the following secondary effects:

    a. More extensive areas will be covered by structures and paving, which will increase surface runoff and associate surface water contamination.

    b. Greater numbers of vehicles will exist, with associated increase in air pollution.

c. Property values of areas served will increase with associated increases in taxable values for local governmental units.

d. Urban development will gradually displace native wildlife. To the extent that new development is induced in urban areas rather than the countryside, wildlife will be benefited.

6. The installation of waste water collection and interceptor lines resulted in temporary interference with traffic movements.

7. The facility will occupy some 15 acres of land, preventing its use for other purposes. Since the site is in the Monument Creek flood plain, this effect is not significant.

VI SHORT TERM USES VS. LONG TERM PRODUCTIVITY

1. The project constitutes a short-term commitment of the site to waste water treatment purposes, probably until 1985 or 1990. The site is too small to permit horizontal expansion. Whether a long-term commitment of the site is being made will depend upon: future effluent standards and the capability of the lagoon system to meet these standards; downstream population growth pressures and possible changes in land use plans; pending area-wide water quality planning studies. If the treatment facility is later abandoned, it will be relatively easy to return the site to its original condition.

2. The facility will make possible further intensification of development within the sanitation districts. This will further commit these areas to urban purposes and will require a long-term commitment of local units of government to the provision of water and other facilities and services.

3. Encouragement of development in areas served will tend to reduce pressures to develop outlying, open land. This will preserve natural resources and agriculture over the short term in accordance with land use planning objectives and zoning. Options for best long-term use of these areas will be kept open.

4. Improvements in stream quality achieved by the project will improve long-term conditions for aquatic life and for human recreational use of Monument Creek as an open space corridor, in keeping with area plans.

VII IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

1. The project will irretrievably commit power, materials, chemicals, and manpower which are utilized in its construction and operation.

2. Urbanization made possible by the project is expected to irreversibly commit lands to intensive uses. Once subdivided and provided with sewers and other public facilities, these areas are unlikely to revert to a natural condition or to agricultural use.

3. The site is not irreversibly committed to use as a treatment facility. It will probably accommodate population increases to 1985 or 1990, but beyond this time a new location may be required because: the site is restricted in size; future growth pressures will probably be in a downstream location; the lagoon involves minimal construction, increasing feasibility of replacement at another site, and possibly involving more advanced treatment.

VIII PUBLIC PARTICIPATION

Beginning in 1969 a number of studies and plans were prepared dealing with the sewering and development of the Palmer Lake, Monument, Woodmoor area. (Bibliography 1, 18, 19, 20, 21) Early efforts in local participation were directed toward obtaining agreement on joint treatment facilities for the three districts. Facility plans were based upon enlargement of the existing Monument lagoon, for which funding is now being sought. As plans for the area were developed, a concerted effort was made by the Pikes Peak Area Council of Governments to obtain public participation through meetings and hearings in the area, and to involve all effected local, state, and federal agencies.

Individual property owners in the vicinity of the proposed facility were not contacted. A group of concerned property owners and residents was formed in the Pine Hills area, under the leadership of B/Gen. Charles W. Lenfest, to oppose the project. This group consists of some 40 individuals as follows: 10 local residents, 9 property owners resining in Colorado Springs, 1 property owner residing elsewhere in Colorado, 17 property owners residing outside of Colorado (total 208 acres); 4 ranch owners downstream from the lagoon (total 241 acres). During the past 2-1/2 years, representatives of this group have attended meetings and hearings, filed statements, and otherwise gone on record as being opposed to the proposed project (22,23,24).

Norman B. Bodinger, developer of Pine Hills, provided the site for the original Monument lagoon while serving as mayor of the City of Monument. He has contested aeration improvements made to the original Monument lagoon, a matter which is now before the courts. He has also contested the EPA environmental assessment and negative declaration prepared for the proposed project (25), and has otherwise made known his objection to the continuation and enlargement of the lagoon.

Interviews were conducted during this environmental study with General Lenfest and Mr. Bodinger. Each supplied valuable background information concerning the effect which the project would have on residents and property owners in the vicinity and other relevant matters.

AGENCIES AND INDIVIDUALS CONTACTED

During the course of this environmental assessment study, the following individuals and agencies were contacted for information concerning the project.

1. Joseph McCammon, President, Joe Stallsmith: Palmer Lake Sanitation District.
2. Joel Webster, Bill Guise, Paul Ferarro, Bill Subolewski; U.S. Environmental Protection Agency.
3. Jane H. Bock; Ecological Analysis, Inc., Department of Biology, University of Colorado.
4. B/Gen. Charles W. Lenfest; Resident of Pine Hills.
5. Norman B. Bodinger; Developer of Pine Hills and local resident.
6. Manuel Manzamares, President, Ed Brown, Don Brown; Monument Sanitation District.
7. Mayor Staybaugh, City of Monument, Colorado.
8. Randall Warthen, Mayor; City of Palmer Lake, Colorado.
9. John Price, George McIntyre, Mr. Punkett; Woodmoor Water and Sanitation District.
10. Roland Gow, George Lauderdale; Pikes Peak Area Council of Governments.

11. George Lunetta, Hydrologist; El Paso County.

12. Gary Boetcher, John Fisher, Dave Sneesby; El Paso County Planning Department.

13. Don Nielson; Fountain Valley Soil Conservation District, Colorado Springs.

14. Larry Rasmussen; City County Environment and Health Department, Colorado Springs.

15. Gary Windolff, Paul Gilbert, Bob Regan; Nelson Hailey, Patterson, Quirk, Engineers.

16. Richard Beidelman; Department of Biology, University of Colorado.

17. Larry Lang, Don Bressler; Colorado Water Conservation Board.

18. Mark Davidson; Colorado Water Resources Board.

19. Philip Schmuck, Mr. Brown; Colorado State Division of Planning.

20. Glen Keller, Director; Colorado State Department of Health.

21. Col. Robert J. Daniel; Colorado Water Quality Citizens Group.

22. Colorado Land Use Commission, Denver.

23. Don Worm; Colorado Division of Wildlife, Denver.

24. Albert E. Melcher; Rocky Mountain Council on Environment, Denver.

25. Kenneth Wood, Don Musso, Mr. Poole; Pike National Forest at Monument, Colorado.

26. J. E. Biesecker, Dist. Chief, Howard E. Simpson, John Keith, Lucy Loughlin; U.S. Geological Survey.

27. Bill Hill; U.S. Army Corps of Engineers, Albuquerque.

28. Art Hale; U.S. Bureau of Sports Fisheries and Wildlife.

29. U.S. Soil Conservation Service, Denver.

30. Colorado State Geological Survey, Denver.

31. Earl Balkum; Colorado Water Pollution Control Commission.

BIBLIOGRAPHY

1. "Pikes Peak Regional Land Use Plan - 1990," March, 1970, Pikes Peak Area Council of Government.

2. Comprehensive Sketch Plan - Palmer Lake, Colorado, Jose Louis Yguado and Associates.

3. Perspective, Pikes Peak Region, 1972-73, Pikes Peak Area Council of Governments, Jan. 1, 1973.

4. Project Team, Introduction and Policies, Vol. 1, Pikes Peak Area Council of Governments, April, 1973.

5. "Interim Land Use Plan, Vol. I, Policies, Legislation," Colorado Land Use Commission, Dec., 1972.

6. "Interim Land Use Plan, Vol. II, Policies, Land Capabilities," Colorado Land Use Commission, April, 1973.

7. Pikes Peak, Land Use Planning for Air Quality in the Pikes Peak Area, Kaman Sciences Corporation, August, 1972.

8. El Paso County Planning Commission, Annual Report, County Planning Department, Colorado Springs, Colorado, 1972.

9. "Census of Population and Housing, Colorado Springs SMSA, 1970," Pikes Peak Area Council of Governments, 1972.

10. "Current Population Estimates, Analysis Areas, Census Tracts, El Paso County," January, 1974, PPACG.

11. Alternative Population and Employment Forecasts, El Paso County, 1970-2000. Summary Report," Pikes Peak Area Council of Governments. 1973.

12. General & Engineering Geology of the United States Air Force Academy Site, Colorado, David J. Varnes & Glenn R. Scott, with a section on Ground Water by W. D. E. Cardwell & Edward D. Jenkins.

13. Soil Survey Field Data, Maps and Interpretations, U.S. Soil Conservation Service, March 29, 1974.

14. "Manual for Preparation of Impact Statements for Waste Water Treatment Works," Preliminary Draft, Environmental Protection Agency, March 2, 1973.

15. "Environmental Impact Appraisal and Negative Declaration Palmer Lake, Colorado, Project - C080306" U.S. Environmental Protection Agency, April 23, 1973.

16. Private Communication, Land Cost Estimates, Norman B. Bodinger, April, 1974.

17. "Water Supply and Demand, Monument, Colorado," January, 1974, Pikes Peak Area Council of Governments.

18. "Water and Sewer Facilities Plan, 1970-1990, Report II Monument-Palmer Lake-Woodmoor Basins," Pikes Peak Area Council of Governments, Draft, October, 1969, NAPQ.

19. "Interim Plan for Water Quality Management, El Paso and Teller Counties," - Pikes Peak Area Countil of Governments, August, 1971.

20. Palmer Lake - Service Plan (Proposed) Palmer Lake Sanitation District (Revised), Nelson, Haley, Patterson, Quirk, Inc., Dec., 1970.

21. Contract Documents and Sepcifications for Construction of Sewerage Treatment Facilities at Palmer Lake, Colorado, Nelson, Haley, Patterson & Quirk, Inc., Colorado Springs, Colorado, June, 1973.

22. Objections Filed Against Environmental Assessment and Negative Declaration by B/Gen. Retr. Charles Lenfest, Jan. 26, 1972.

23. Letter Protest to U.S. Environmental Protection Agency concerning enlargement of Monument Lagoon, by B/Gen. Charles W. Lenfest for concerned Group, July 26, 1972. Cox & Kenelly Attorneys & Counselor at Law, March 9, 1973.

24. "Affidavit in Support of Motion for Preliminary Injunction, C-5196," U.S. District Court in the District of Colorado.

25. Civil Suit, for Injunctive and Declaratory Relief, Pine Hills, et al, vs. U.S. Environmental Protection Agency, July 1973 in U.S. District Court District of Colorado, Civil Action C-5196.

26. "An Ecological Assessment of Monument Creek Basin, Palmer Lake to Air Force Academy," April, 1974, Ecological Analysts, Inc., Boulder, Colorado (Special Study for this environmental assessment report)

27. Distribution of Mammals in Colorado, D. L. Armstrong, Monograph No. 3, 1972, Museum of Natural History, University of Kansas.

28. A Field Guide to the Mammals, H. W. Burt, & R.P. Grossenheider 1952, Houghton Mifflin Co.

29. Wild Mannals of Colorado, R. R. Lechleitner, 1969, Pruett Publ. Co., Boulder, Colorado.

30. A Field Guide to Animal Tracks, O. J. Murie, 1954, Boston, Houghton Mifflin Co.

31. Project Team, The Ecology of the Pikes Peak Region, Vol. No. 2, Pikes Peak Area Council of Government, Nov. 1973.

32. "Estimating Fields of Gambel Oak from Foliage Cover and Basal Area," 1970, S. S. Hutchings and L. R. Mason.

33. "Account of an Expedition from Pittsburgh to the Rocky Mountains, E. James, 1823," Two volumes, H. C. Carey & I. Lea, Philadelphia.

34. "Ecosystems of the East Slope of the Front Range in Colorado," 1961, J. Marr, University of Colorado Press, Boulder.

35. "Colorado Plant Life," F. Ramsley, 1972, University of Colorado, 1927.

36. "Vegetation of the Chaparral - Covered Foothills Southwest of Denver," F. Ramaley, 1931, University of Colorado Studies 18:231-237.

37. "Gambel Oak for Southwestern Wildlife," Reynolds, Clarey, and Folliott, 1970 68:545-547.

38. "Study of Vegetation of Mesa Region East of Pikes Peak," H. L. Shantz, 1906, Bot. Graz. 42:16-47, 179-207.

39. "Foothills Vegetation of the Colorado Front Range," A. G. Vestel, 1917, Bot. Gaz 64:353-385.

40. Geologic Map and Report, MF 482" Colorado Springs to Air Force Academy," Scott and Wobus.

41. "Geologic Atlas of the United States, Colorado Springs Folios," - 1916, U.S. Geological Survey.

42. "Flood Plain Information, Fountain and Jimmy Camp Creeks El Paso County," U.S. Corps of Engineers.

43. Monument Land Use Planning Studies, Data on Land Use, 1974, PPAGG.

44. Climatology of the United States and Annual and Dicennial Weather Summaries, U.S. Department of Commerce, National Weaterh Service.

45. "Palmer Lake Community Profile," 1971-72, Kathy E. Scales Colorado Division of Commerce and Development.

Appendix B
EPA Grant Offer of February 7, 1973

ADDITION, THIS OFFER IS MADE SUBJECT TO COMPLETION OF PART B OF THIS Offer and Acceptance AND THE FOLLOWING CONDITIONS:

Interim Grant Regulations found in Federal Register, Vol. 36, No. 229, November 27, 1971 and Vol. 37, No. 112, June 9, 1972, are incorporated herein by reference.

That the project be ready for construction within 90 days of acceptance of the grant offer.

Federal participation in fees for technical services, legal, fiscal, and administrative costs will be limited to the portion of those costs associated with the eligible part of the total project.

Submission of evidence that the proposed collection system will be scheduled for construction concurrently with the project for which Federal grant is requested.

This offer is conditioned to the effect that the applicant will require his consulting engineer to prepare an operation manual describing the functions and controls for each process in the specific plant, plus physical and laboratory controls, maintenance and personnel requirements necessary to operate the facility at maximum effectiveness.

The applicant agrees to abide by the recommendations of the operation manual as approved by the State and the U. S. Environmental Protection Agency.

This offer is further conditioned in that the applicant will require his consulting engineer to provide on-the-job training to instruct plant employees in the operation of equipment, coordination of the laboratory with plant controls, and other functions for which the plant personnel will be responsible. This training will include the initial "start-up" phase.

(Cont'd on Insert Sheet)

HIS OFFER MUST BE ACCEPTED, IF AT ALL, ON OR BEFORE *(date)*

FEB 2 8 1973

FOR THE UNITED STATES OF AMERICA, FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

THE COMMISSIONER John A. Green	DATE FEB 7 1973
TLE OF OFFICER Regional Administrator, EPA, Region VIII	

SECTION II – ASSURANCES

The Applicant hereby gives assurance to the Commissioner of the Federal Water Pollution Control Administration:

A. That actual construction work will be performed by the lump sum (fixed price) or unit price contract method, that adequate methods of obtaining competitive bidding will be employed prior to awarding the construction contract, and that the award of the contract will be made to the responsible bidder submitting the lowest acceptable bid;

B. That the project will not be advertised or placed on the market for bidding until the final plans and specifications have been approved by the Commissioner and the appropriate State agency, and the Applicant has been so notified;

C. That the construction contract will require the contractor to furnish performance and payment bonds, the amount of which shall each be in an amount not less than fifty percentum (50%) of the contract price, and to maintain during the life of the contract adequate fire, and extended coverage, workmen's compensation, public liability and property damage insurance;

D. That any change or changes in the contract which make any major alteration in the work required by the plans and specifications, or which raise the cost of the project above the latest estimate approved by the Commissioner will be submitted to the Commissioner for prior approval;

E. That the construction of the project, including the letting of contracts in connection therewith, shall conform to the applicable requirements of State, territorial and local laws and ordinances;

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FEDERAL WATER POLLUTION CONTROL ADMINISTRATION [illegible]

OFFER AND ACCEPTANCE OF FEDERAL GRANT FOR SEWAGE TREATMENT WORKS UNDER 33 U.S.C. 466 et seq.

PART A SECTION I - OFFER

OCATION OF PROJECT (*State, County, City*) Colorado, El Paso, Palmer Lake	PROJECT NUMBER C 080306

LEGAL NAME AND ADDRESS OF APPLYING AUTHORITY (*herein called the "Applicant"*)

Palmer Lake Sanitation District
P. O. Box 687
Palmer Lake, Colorado 80133

3. PROJECT FINANCING UNDER TERMS OF THIS OFFER

Total estimated project cost	$ 540,700.00
Estimated project cost eligible for Federal participation	$ 525,700.00
FEDERAL GRANT OFFERED	$ 394,275.00

DESCRIPTION OF PROJECT

Interceptor sewer line and waste water treatment facility.

Eligible portion of project is as follows:

Interceptor sewer line from treatment lagoons to and including manhole at station 209

Aerated lagoon system and chlorination facility.

Consideration having been given by the Commissioner of the Federal Water Pollution Control Administration to (a) the application sub-ted by the Applicant pursuant to Section 8 of the Federal Water Pollution Control Act, as amended (33 U S C 466 et seq.) (b) the public efits to be derived by the construction of this project, (c) the relation of the ultimate cost of constructing and maintaining the ks to the public interest and to the public necessity for the works, and (d) the adequacy of the provisions made or proposed by Applicant for assuring proper and efficient operation and maintenance of the treatment works after completion of the construction reof, and it having been determined by the Commissioner that such project (a) is in conformity with the approved State water lution control plan submitted pursuant to Section 7 of the Act, (b) meets the criteria for Federal aid specified in Section 601.29 he regulations, and (c) is included in a comprehensive program developed pursuant to the Act, and the Commissioner having her determined that the State water pollution control agency has approved the project and certified that it is entitled to priority r other eligible projects on the basis of financial as well as water pollution control needs.

The Commissioner of the Federal Water Pollution Control Administration, acting in behalf of the United States of America, by offers:

To make a Federal grant to the above named Applicant subject to the assurance included in this document as Section II, in ler to aid in financing the construction of the project pursuant to the Federal Water Pollution Control Act, as amended. The ount of the Federal grant will not exceed the appropriate percentage of the estimated reasonable cost of the project, as ablished by law, or such dollar limitation so established; provided, that in the event the actual reasonable cost of any project, as ermined by the Commissioner upon completion of construction, is less than the estimated reasonable cost upon which the grant ter is based, such actual cost shall be used to determine the amount of the Federal grant, and the grant shall be reduced as essary to conform with the limitations hereinabove cited.

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CONSTRUCTION GRANT
REGION VIII

ADDITIONAL GRANT OFFER CONDITIONS (Part A Insert)

That the existing treatment facilities now being utilized will continue in operation and provide treatment at least equal to existing treatment until such time as the new treatment facilities are placed in operation.

Approval of this project for Federal financial assistance does not constitute Federal sanction or approval of any changes or deviations from established water quality standards, criteria or implementation dates.

That action will be taken to enact an enforceable sewer use ordinance to eliminate existing and prohibit future clear water connections to separate sanitary sewers, and that prior to discharge to public sewers all industrial wastes be pretreated to a level of strength and toxicity amenable to treatment with domestic waste or otherwise be excluded from the sewerage system.

This offer is conditioned to the effect that the applicant will, upon the completion of construction activities and prior to final inspection, landscape the premises and make the area as aesthetically pleasing as reasonably possible.

This offer is further conditioned to the effect that should excessive noise from the operation of mechanical equipment such as air compressors be experienced, remedial measures will be taken to minimize this impact.

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CONSTRUCTION GRANTS
REGION VIII

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That the construction contract will provide that the representatives of the Federal Water Pollution Control Administration and the State will have access to the work whenever it is in preparation or progress and that the contractor will provide proper facilities for such access and inspection.

G. That the Applicant will provide and maintain competent and adequate engineering supervision and inspection at the project to insure that the construction conforms with the approved plans and specifications.

H. That adequate accounting and fiscal records will be maintained which fully disclose the amount, receipt, and disposition of the grant assistance provided, the total cost of the project in connection with which the grant has been offered, the amount and identification of that portion of the cost of the project supplied from other sources, and such other records as the Commissioner may prescribe to facilitate an effective audit.

I. That all funds granted pursuant to the Federal Water Pollution Control Act shall be expended solely for carrying out the approved project,

J. That the Commissioner and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the grantee that are pertinent to grants received under the Act, and the grantee shall submit to the Commissioner or the Comptroller General of the United States such documents and information as they may require in connection with the project

K. That the construction contract will require the contractor to comply with the regulations of the Secretary of Labor made pursuant to the Davis-Bacon Act of March 3, 1931, as amended (40 U.S.C. 276a through 276a-5), the Anti-Kickback Act of June 13, 1934 (40 U.S.C. 276c), and the Contract Work Hours Standards Act of August 13, 1962 (40 U.S.C. 327-330), and any amendments or modifications thereto, to cause appropriate provisions to be inserted in subcontracts to insure compliance therewith by all subcontractors subject thereto, and to be responsible for the submission of statements required of subcontractors thereunder, except as the Secretary of Labor may specifically provide for reasonable limitation, variations, tolerances, and exemptions from the requirements thereof,

L. That the Applicant will demonstrate to the satisfaction of the Commissioner his ability to pay the remaining cost of the project.

M. That the Applicant will demonstrate to the satisfaction of the Commissioner that he has or will have a fee simple or such other estate or interest in the site of the project, including necessary easements and rights-of-way, as the Commissioner finds sufficient to assure undisturbed use and possession for the purposes of construction and operation for the estimated life of the project,

N. That the declarations, assurances, representations and statements made by the Applicant in the application, and all documents, amendments and communications filed with the Federal Water Pollution Control Administration by the Applicant in support of its request for a grant, will be fulfilled.

O. That the applicant will permit the Administration or its authorized agents to have access to the project and the records pertaining to its operation at any reasonable time following completion of construction for the purpose of inspecting the operation and maintenance of the project;

P. The Applicant agrees to construct the project or cause it to be constructed to final completion in accordance with the application and plans and specifications approved by the Commissioner.

Q. That the applicant agrees to provide a sign for identification of this project in accordance with specifications to be furnished by the U. S. Environmental Protection Agency.

R. That the facility will be maintained and operated in accordance with such requirements as the Administrator may publish from time to time concerning methods, techniques, and practices for economic, efficient, and effective operation and maintenance of treatment works.

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CONSTRUCTION GRANTS
REGION VIII

SECTION III - ACCEPTANCE

EHALF OF (Legal Name of Applicant)

PALMER LAKE SANITATION DISTRICT

I, the undersigned, being duly authorized to take such action, as evidenced by the attached CERTIFIED COPY OF AUTHORIZATION BY THE APPLICANT'S GOVERNING BODY, do hereby accept this offer and make the assurances contained herein.

NATURE OF REPRESENTATIVE: Joseph R. McCammon

DATE: February 13, 1973

AND TITLE OF REPRESENTATIVE (Type or Print)

JOSEPH R. McCAMMON, Chairman
Palmer Lake Sanitation District Board

RESOLUTION

WHEREAS the Environmental Protection Agency has offered a grant of $394,275 to the Palmer Lake Sanitation District (EPA Project No. C 080306) for the purpose of constructing a sewage treatment plant with chlorination facilities and an interceptor sewer line from treatment lagoons to and including manhole at station 209+30, and

WHEREAS the Environmental Protection Agency has stipulated as a part of this offer grant conditions which the Palmer Lake Sanitation District agrees are reasonable and in conformance with stipulations stated by the Pike's Peak Area Council of Governments and the Colorado State Health Department, and

WHEREAS the Environmental Protection Agency has stated a requirement that the Palmer Lake Sanitation District provide a certified authorization by the District Board designating the representative, by name and title, authorized to accept the aforesaid grant offer,

NOW, THEREFORE BE IT RESOLVED that JOSEPH R. McCAMMON, Chairman of the Palmer Lake Sanitation District Board, be designated as the representative and be authorized to accept the grant of $394,275 from the Environmental Protection Agency and to agree to the stipulations accompanying the grant.

DONE at the regular meeting of the Palmer Lake Sanitation District Board at the Town Hall of Palmer Lake, County of El Paso, State of Colorado, on this 13th day of February, 1973.

Joseph R. McCammon
JOSEPH R. McCAMMON, Chairman

J. Kenneth McCall
J. KENNETH McCALL, Vice-Chairman

Gary E. Chase
GARY E. CHASE, Treasurer

Joseph F. Stallsmith
JOSEPH F. STALLSMITH, Member

ATTEST

ALICE B. FOOTE
Secretary (Seal)

RECEIVED
FEB 26 1973
CONSTRUCTION GRANTS
REGION VIII

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80203

Tel. No. (303) 837-3961
Date April 23, 1973

NEGATIVE DECLARATION

To All Interested Government Agencies and Public Groups:

In accordance with the Federal Water Pollution Control Act, as amended, the Environmental Protection Agency (EPA) is authorized to make grants of Federal funds to any State, municipality, intermunicipal or interstate agency for the construction of publicly owned wastewater treatment works. Prior to the approval of any grant, EPA conducts a detailed environmental review of a proposed grant project to evaluate the anticipated environmental effects.

If EPA determines that the environmental effects of the proposed grant project will not be significant, EPA issues a Negative Declaration to inform all interested parties that EPA has decided not to prepare an environmental impact statement for the proposed project in accordance with Section 102(2) (C) of the National Environmental Policy Act (NEPA).

Accordingly, EPA has conducted an environmental review for the following proposed grant project:

Project Number - C 080306

Palmer Lake, Colorado

The environmental review process, including a consideration of comments received on a previous Negative Declaration issued on January 26, 1973, did not indicate a significant environmental impact from the proposed action. Consequently, an environmental impact statement will not be prepared.

An environmental impact appraisal, which summarizes the reasons why a statement is not required, is on file at the above office and will be available for public scrutiny upon request. It is very important that EPA be notified immediately of any objections to this project.

Sincerely yours,

John A. Green
Regional Administrator

407<

ENVIRONMENTAL IMPACT APPRAISAL

A. Identity of Project

Name of Applicant - Palmer Lake Sanitation District

Address - Palmer Lake, Colorado 80133

Project Number - C 080306

Location of Project - Palmer Lake and Monument, Colorado

B. Background

A negative declaration/environmental impact appraisal for this project was prepared and distributed for review on January 26, 1973. On February 7, 1973, EPA tendered a Federal grant offer to the Palmer Lake Sanitation District in the amount of $394,275.00. The Palmer Lake Sanitation District accepted the Federal grant on February 13, 1973. On March 9, 1973, EPA received written objections to the project (copy attached) from B/Gen. Charles W. Lenfest.

EPA has re-evaluated this project in response to these comments to determine whether there is good cause for EPA to suspend the grant and prepare an environmental impact statement. This revised environmental impact appraisal documents the reasons why EPA has decided not to prepare a formal environmental impact statement.

C. Summary of Assessment

1. Brief Description of Project:

The Palmer Lake Sanitation District is a duly qualified quasi-municipal organization created in accordance with the laws of the State of Colorado. At present an agreement is forthcoming between Monument, Woodmoor, and Palmer Lake Sanitation Districts which will result in a waste water treatment facility which will treat the combined wastes of these communities. The Palmer Lake Sanitation District is the legal authority applying for a Federal grant, and the district is aware of its responsibility in this matter.

At the present time, the community of Palmer Lake and the surrounding area is not served by any sewage collection, treatment, or transmission facility. All domestic wastes generated within the area are disposed of through the use of septic tanks and leaching fields or cisterns. Due to the increasing population and consequently the increase in density of development within the area, the use of septic tanks and leaching fields is no longer a permissible solution for the disposal of liquid sewage wastes. Topographic and geological features within the area also are not conducive to extensive use of this kind of facility. Raw sewage can visibly be observed on the surface above the leaching fields and has been recognized as a serious health hazard by local and state health officials. These waters subsequently reach Monument Creek, the major receiving stream flowing through the area.

Monument Lake, downstream from Palmer Lake, is used for recreational purposes and upstream contamination poses significant health problems. In order to maintain a pleasant environment within the area, it is imperative that community sewage disposal facilities be provided.

An existing sewage treatment facility consists of collection lines and a lagoon which serves the area included in the Monument Sanitation District and the Woodmoor Water and Sanitation District. The Woodmoor area is a rapidly developing single family residential area. At the present time, the existing sewage treatment facilities are not adequately treating the wastes from Monument and Woodmoor. A cease-and-desist order has been issued by the Colorado Health Department effective December 1, 1972.

The proposed project for which an Environmental Protection Agency Federal grant has been consummated consists of an interceptor sewer line and waste water treatment facility. This facility will treat the combined wastes of the Monument, Woodmoor, and Palmer Lake Sanitation Districts. The interceptor will consist of 12,625 feet of 12-inch diameter pipe and 8,857 feet of 10-inch diameter pipe. The treatment facilities will consist of two aerated lagoons having a combined area of 4.81 acres, a polishing pond, and a chlorination facility. The existing 2.27 acre lagoon will be rehabilitated and used as the polishing pond to further upgrade the waste water effluent. The treatment facility is designed to serve a population equivalent of 7,000 persons and can easily be expanded to accommodate the projected area population of 13,000 to 14,000 persons. The planning and final design of the facilities for which Federal aid is being spent conforms in entirety with the Interim Water Quality Management Plan prepared and approved by the Pikes Peak Area Council of Governments in 1971. The proposed sewage treatment facility is designed to meet all current State, Federal, and local applicable regulations. The project does not involve the disposal of any industrial wastes, but some of the area is zoned industrial, and the Woodmoor Technological Center is planned. Therefore, the disposal facility could be partially used for treatment of industrial wastes in the future. The quantity, quality, and nature of such wastes is unknown. However, should the proposed facility be called upon to treat industrial wastes, there will be a requirement that the waste be pretreated to a degree that will allow adequate treatment in the facility. The Palmer Lake Sanitation District will hire the necessary maintenance personnel to properly operate and maintain collection, transmission, and treatment facilities.

The proposed project will eliminate the use of existing septic tanks in the Palmer Lake Sanitation District, and consequently, the pollution presently being generated by the same within the area to be served by the proposed facility. Construction of the proposed facilities will eliminate the pollution problem associated with the present lagoon which serves Monument and Woodmoor.

Total project cost is estimated at $540,700, including administrative and engineering costs. Of this amount, $525,700 is eligible for Federal participation under the Federal Water Pollution Control Act Amendments of 1972. The Environmental Protection Agency will provide a grant of $394,275, which is 75 percent of the eligible cost, with the remaining project costs to be borne by the applicant.

The project site is in the flood plain of Monument Creek and protection of the lagoons from flood waters will be required and is being included in the construction of the proposed facility.

A flood plain information study was prepared for Monument Creek in the vicinity of Colorado Springs by the Corps of Engineers, Albuquerque District in May, 1971. The study indicates that an Intermediate Regional Flood in the reach above Templeton Gap outlet to stream mile 10.65 would be approximately 31,000 cubic feet per second (cfs). The intermediate regional flood is defined as having an average frequency of occurrence of 100 years, at a designated location, although it may occur in any year and possibly even in successive years. Flood protection measures will be undertaken within the project site area to protect against a flood having a peak discharge of 20,000 cfs as the project site is well above the reach studied by the Corps of Engineers, and the peak discharge would be less.

The proposed facility will be constructed in stages. Initially, the facility will have a treatment capacity of 0.84 million gallons per day with a biochemical oxygen demand (BOD) of 1,850 pounds per day. The design BOD removal for the facility is a minimum of 85 percent with an average of 90 percent. The design suspended solids removal is 90 percent average. At present these removal efficiencies will meet both state and EPA treatment requirements.

The initial stage will have the capacity to treat the wastes from a population of 7,000 persons. Under the requirements of the Federal Water Pollution Control Act Amendments of 1972, Palmer Lake Sanitation District will be required to obtain a permit to discharge its effluent. Should future discharge requirements become more stringent, the District will be required, via the permit program, to meet the new requirements.

It is anticipated that the initial stage would be expanded in the future to accommodate an influent of 1.56 million gallons per day for an estimated 1990 population of 13,000. Land may be available at the site for expansion beyond 1990 if required, but would have to be acquired by the Palmer Lake Sanitation District.

With the degree of treatment provided, the discharge of plant effluent to Monument Creek will not interfere with the present or future use of Monument Creek water downstream.

At present, Monument Creek is an unclassified stream, but has a high potential for recreational activities. Existing uses of the stream below the site of the proposed facility include irrigation and some use for water supply by the City of Colorado Springs. No body contact type recreation with the water downstream of the proposed project is planned; however, with a wide enough easement to accommodate trails, the area could be used for hiking and picnicking. Land use in the area varies from agricultural to low density development.

There is no evidence that the area proposed for the construction of the project is used for any recreational activity other than possibly hiking and/or bird watching.

The grant offer to the Palmer Lake Sanitation District contains a provision for suitable landscaping subsequent to construction of the facilities and prior to final inspection by the Environmental Protection Agency. By accepting the grant offer, the applicant has agreed to this condition.

The projected growth for the service area is shown in Table 1. The projections provide a reasonable basis for design of the facility, and stage construction of the facility provides flexibility to meet changing conditions of future growth, whether it be accelerated over the projections or falls short of them.

TABLE 1

POPULATION PROJECTIONS BY SELECTED YEARS

Area	U.S. Census 1960	1970	1975	1980	1985	1990
MONUMENT	204	300	590	665	775	870
PALMER LAKE	542	1,405	1,600	1,800	2,115	2,450
WOODMOOR	0	315	2,575	5,925	8,525	8,525
TOTAL SERVED BY PROJECT			4,765	8,390	11,415	11,845

FRINGE AREAS	0	180	419	656	893	1,130
TOTAL FOR AREA	746	2,200	5,184	9,046	12,308	12,975

Percent utilization of the proposed facility is shown in Table 2.

TABLE 2

PERCENT UTILIZATION OF PROPOSED
TREATMENT FACILITIES

Area	1975	1980	1985	1990
MONUMENT	12	8	7	7
PALMER LAKE	34	21	18	21
WOODMOOR	54	71	75	72
TOTAL	100	100	100	100

Monument, Palmer Lake, and Woodmoor are estimated to account for 90.5 percent of the 1990 project growth in the Monument Basin area. It is to be noted, however, that the fringe areas have been fully platted and roads graded. The rate of growth in these fringe areas could change depending on the availability of utilities. As presently planned, the project will not provide sewer service to any fringe area outside the service area of Woodmoor, Monument, and Palmer Lake. Service to the fringe area in the future would depend on (1) incorporating the fringe area into one of the sanitation districts and (2) the extent of future development within the fringe area which would determine the feasibility of extending sewer services.

The present population residing within the Palmer Lake-Monument portion of the service area consists of large numbers of retired individuals living on fixed income, and a large portion of the housing within the Palmer Lake-Monument area is of a low income nature. It is not possible to construct the entire system or any portion thereof without Federal, State, or other outside assistance. Excessive mill levy, service charges and tap fees would probably be required in order to issue the bonds necessary to finance the entire system.

Existing development in the general area of the proposed facility consists of six homes. One of these is situated on a lot adjacent to the present facility and the remaining five are at distances that range from approximately 1,500 feet to 2,800 feet from the facility. The addition of two lagoons to the north of the present one will result in two existing residences to the north of the present facility being closer to the expanded facility by perhaps 1,000 feet.

2. Probable Impact of The Project on The Environment:

The construction of the waste water treatment facilities will insure the adequacy of treatment required in order not to degrade the quality of Monument Creek. Monument Creek to date has not been classified by the Water Pollution Control Division, Colorado Department of Health. The construction of a sewage collection system by the Palmer Lake Sanitation District collaterally with the construction of the waste water treatment facilities will eliminate individual septic tanks, and any resulting flow of tank effluent to the ground surface, thereby eliminating a potential health hazard.

The expanded waste water treatment facilities will be constructed on the site occupied by the existing Monument treatment lagoon and committed to this use. Project construction at this site will cause only minor and temporary inconvenience, noise, dust and exhaust gases during the construction period.

This project will assist in the development of higher residential land use, but any land use will conform with the Palmer Lake long range community plan and the PPACG Regional

Utility Plan. This development could contribute to increased congestion, noise and pollution problems in the absence of land use and environmental planning and controls.

Significant odor problems presently exist at certain times of the year from the existing lagoon. It is suspected that many of the objectionable odors originate from the marshy area into which the present lagoon discharges. These odors adversely affect residences in the area.

The odors are caused by hydrogen sulfide gas (rotten egg odor) produced by anaerobic conditions in the existing lagoon and marsh area. Anaerobic conditions exist when there is insufficient oxygen present to adequately degrade the wastes. Oxygen is introduced into the lagoon through surface contact with the atmosphere and by a compressed air system. The shallow depth of the existing lagoon (5 ft.) prevents adequate oxidation of the wastes. The ice cover over the marsh area during the winter prevents oxygen from reaching the organic wastes. Objectionable hydrogen sulfide gas is trapped under the ice and is released during the early spring when the ice breaks up.

The proposed facility has been designed and will be operated and maintained to prevent odor problems to the maximum extent possible. The proposed facility consists of two deep ponds (14 ft. deep) which will contain compressed air diffuser equipment for the addition of necessary oxygen to the wastes. Odors will only be a problem if there is equipment failure, if the lagoons ice over or if the treatment facility is inadequately operated and maintained. Extensive monitoring and analysis equipment will be incorporated with the ponds to exactly determine the design parameters for proper operation. The Palmer Lake Sanitation District will be required to submit an operation and maintenance manual for EPA approval before the final Federal grant payment will be made on the proposed project. The District will hire the necessary maintenance personnel to properly operate and maintain the facility.

Aeration equipment in the lagoons to be constructed will prevent icing over in all but the most severe weather conditions. Ice that may form around the edges of the lagoons will not hinder effective operation. The existing lagoon will serve as a polishing pond and since it will not be aerated, may ice over during the winter for a period of three to five months but will continue to operate effectively with the ice cover. During construction of the proposed facilities, the existing lagoon will be rehabilitated.

There will be an odor from the proposed facility. Under normal operating conditions, the odor will not be a hydrogen sulfide odor (rotten egg odor). While difficult to describe, the normal odor emanating from this facility will be a sewage odor similar to that produced by a natural non-septic marsh area.

The construction of any facility such as the one proposed will have an aesthetic impact. The aesthetic impact is particularly important in this case because of the proximity of the facility to existing and proposed residential developments. To a degree, personal opinion becomes involved in setting aesthetic standards and evaluations. What may be pleasing or displeasing to one person may not stimulate a favorable or unfavorable response from someone else. Because aesthetics is a matter of individual sensitivities, it would be presumptuous to conclude that the proposed facility will be an aesthetic improvement over existing conditions. However, aesthetics will be a prime consideration in the design and construction of this proposed project.

The facility has been designed as best possible to avoid disturbance of the existing trees and other natural features within the area. The ponds have also been created in shapes other than strictly rectangular to avoid the appearance of block units within the area. Landscaping will also be undertaken after completion on the initial construction.

3. Any Probable Adverse Environmental Effects Which Cannot Be Avoided:

There may be a noise impact in the immediate vicinity of the proposed facility from mechanical equipment such as blowers.

The noise impact will be evaluated and remedial measures taken to minimize this impact. Mufflers or acoustical coverings for the equipment will be installed as needed.

The site of the existing lagoon is committed to use for waste water treatment. The commitment of additional land to a relatively permanent waste water treatment facility removes the land from other potential use. This may be considered by some as an adverse impact. It is an impact, however, that cannot be avoided, regardless of the location of the facility.

The discharge of treated effluent to Monument Creek and a marsh immediately south of the present lagoon is unavoidable; however, this is preferable to the threat of raw sewage effluent leaching into the stream or surfacing.

The marsh to which the effluent would be discharged is about two acres in size and supports typical reed and aquatic vegetation, and mallards and several species of songbirds have been observed. No odor was apparent at the time of a field inspection on April 5, 1973, but as there is little flow through the marsh, there is significant odor potential. The U. S. Bureau of Sport Fisheries and Wildlife feels that the marsh would be useful as a resting area for migrating waterfowl, and maybe as a breeding area for several pairs of waterfowl each season. The marsh may be an ecological asset to the community if the car bodies presently in the marsh are removed and the quality of the plant effluent is improved as proposed by the project. Improvement of the quality of the effluent may substantially reduce or eliminate the odor problem. Based on the field inspection and discussion with the Bureau of Sport Fisheries and Wildlife, EPA believes the marsh should be left as is, except for removal of car bodies, until the expanded plant becomes operational. After a suitable operation period, the length of which is undeterminable at this time, the situation with respect to odor emanating from the marsh should be re-evaluated.

Existing natural ground cover will be destroyed along the sewer line routes, and some erosion can be expected before natural recovery of ground cover has occurred. Adequate erosion control and landscaping can facilitate the restoration of disturbed areas.

While land use and environmental planning and controls can minimize the impacts of increased residential and commercial development, all of the impacts cannot be eliminated. The rural character of this area can be expected to change as development proceeds.

See the previous discussion of odors and aesthetics in Section 2 for information on impacts that may be considered adverse.

4. Alternatives Considered With Evaluation of Each:

In the selection of the existing Monument lagoon site as a location for a regional treatment facility, many alternates were considered. The "Water and Sewer Facilities Plan, 1970-1990, Report No. 2, Monument, Palmer Lake, Woodmoor Basins," which was adopted as a part of the Interim Water Quality Management Plan by the Pikes Peak Area Council of Governments, recommended that the present Monument lagoon site be used as a regional facility. In the preparation of the Water and Sewer Facilities plan, many alternates were considered, including the provision of a trunk line throughout the entire Monument valley carrying the Woodmoor-Monument-Palmer Lake sewage to the Colorado Springs facility, or to a facility somewhat south of the Fountain-Security-Widefield area. This plan was also seriously considered in about 1961, but was subsequently discarded due to the cost of construction of such a line.

Another alternate considered was the possibility of taking sewage from this area into the Air Force Academy for combined treatment with the Air Force Academy. The possibility was explored with the appropriate engineering personnel at the Air Force Academy and it was felt that this solution was neither desirable nor possible for the future.

Additional consideration was given to locating a facility at approximately the north boundary of the Air Force Academy. The selection of this alternate was ruled out essentially because of the sparseness of development between that location and the location of the present Monument lagoon. The extension of a trunk line along Monument Creek to a point on the north boundary of the Air Force Academy would do little to meet any existing needs within the area. At the present time, development both to the east and west of such a line is not of a density such that collection facilities could be installed economically to serve these areas. It was not anticipated that development would reach this stage during the length of the study period for which the plan was being prepared, 1970 through 1990. The construction of an interceptor sewer into the area north of the Academy would induce pressures for zoning changes to permit high density development. Such development would be inconsistent with present land use plans showing this area as open space.

In the preparation of the water and sewer facilities plan, consideration was also given to serving each of the three primary communities involved (Palmer Lake, Monument and Woodmoor) with separate sewage treatment facilities. Sites for the Palmer Lake facility were considered upstream from Monument Lake. This facility was discarded due to the use of Monument Lake as a recreational facility during the summer months including swimming, boating, etc.

Prior to the time of the preparation of the Interim Plan, the Woodmoor Water and Sanitation District had contracted with the Monument Sanitation District to provide sewage treatment for their District. Since it is generally economically and environmentally desirable to have a common facility as opposed to multiple facilities within a given region, it was determined that it would be an advantage to leave the Monument-Woodmoor system combined and in the future should Palmer Lake decide to install a sewage collection system, the wastes from that area also be combined with the other two areas for treatment in a common facility.

Information developed with regard to all of these alternates including economic costs was presented to the PPACG Technical Review Committee. After consideration of al' alternates, and after discussions with representatives from Palmer Lake, Monument and Woodmoor, public meetings were held within the region explaining the plan which included the location of a regional facility at the Monument lagoon site. The times and locations of these meetings were carried in the appropriate newspapers and were well attended at the time they were held.

After completion of the Interim Water Quality Management Plan, the community of Palmer Lake expressed considerable interest in developing a collection, outfall and treatment system, which would implement the plan recommendations. A feasibility study relating to a project of this type was accomplished with the recommendation that a Sanitation District be formed to provide for the administrative functions.

The original preliminary engineering analysis of the area proposed three alternate locations for a sewage treatment facility. One alternate considered locating a plant upstream from the existing Monument Lake. This alternate, of course, resulted in a much smaller cost to the residents of Palmer Lake for provision of sanitary services, but it was discarded because of the adverse environmental impact on Monument Lake recreation use. The second alternate considered was the extension of an outfall line to a point immediately east of the Town of Monument. At this location, a lift station was proposed with a discharge from that point to the nearest point within the Monument Sanitation District. From this point of discharge, the sewage would have been carried through the Monument system and treated at the existing Monument lagoon. The third alternate considered was one of construction of an outfall line to the existing Monument lagoon with expansion of treatment services at that location being undertaken. After reviewing the economic costs and environmental impacts, the Monument lagoon is the most desirable solution, even though the economic cost to Palmer Lake would be somewhat excessive.

A preliminary cost estimate for each of the three alternatives most discussed at public meetings is given below. These cost estimates include only the cost of the construction activities and land, plus additional operation and maintenance expenses for separate facilities, and have been adjusted for features common to all plans.

Proposed Project

Land	$ 15,000
Treatment Facility	200,000
Net Total	$215,000

Separate Facilities

Land (total)	$ 30,000
Palmer Lake	120,000
Monument	50,000
Woodmoor	120,000
Total	$320,000
Less outfall adjustment	35,000
	$285,000
Capitalized cost of additional O & M: $\frac{\$5{,}000 \text{ per year}}{.05}$	$100,000
Net Total	$385,000

Combined Facilities (approximately 2 miles south of present lagoon)

Land	$ 15,000
Treatment Facility	200,000
Total	$215,000
Additional 2 mile outfall	80,000
Loss of existing investment (Monument facility)	50,000
Net Total	$345,000

If no project were constructed, the present public health hazard in the area resulting from inadequately treated sewage from septic tanks and the existing Monument lagoon would continue.

5. Relationship Between Local Short-term Use of Environment and Maintenance and Enhancement of Long-term Productivity:

The proposed location of the expanded waste water treatment facilities presently supports the existing waste water treatment lagoon of Monument, Colorado. Therefore, a significant portion of the land area required for the construction of the proposed project is not being removed from productive use.

Construction activities will create some short-term inconveniences and adverse environmental impact on the area of a minor nature i.e., noise, dust, etc. Long-term benefits will be marked by the elimination of individual septic tanks and resulting health hazard.

The proposed project will permit expanded residential development, which in the long-term could continue to increase congestion, noise, and pollution. The character of this area as a refuge from urban problems could be changed as a result.

6. Any Irreversible and Irretrievable Commitment of Resources:

The area selected for the waste water treatment facilities, and all materials used in the construction of the proposed project are irretrievably committed for the life of the project. Fossil fuels expended in the construction activities are irretrievable.

The expanded residential and commercial development permitted by this proposed project will commit the developed area to residential and commercial use in the future. While such development is consistent with present approved land use plans, the rural character of this geographical area is being gradually and irretrievably changed.

7. Public Objections to Project, If Any, and Their Resolution:

Public opposition to this project has been expressed. A public meeting was held by EPA on Friday, November 17, 1972, at 7:30 p.m., at the Palmer Lake City Hall to discuss the proposed project and objections. More than 50 people from the Palmer Lake area attended this meeting. The public objections to the proposed project were summarized at the meeting, and by letter to EPA dated July 26, 1972, by General Charles W. Lenfest. General Lenfest was the spokesman for 39 landowners and 8 ranchers holding 3,900 acres in the area. The objections raised by General Lenfest in his July 26, 1972 letter and the EPA responses are as follows:

1. Objection:

The present lagoon comprises a noxious and unsanitary situation in an area that has been planned as a single residence development.

Response:

The present lagoon, which treats the wastes of Monument and Woodmoor, does not meet state waste quality standards requiring 80 percent removal of biochemical oxygen demand waste loadings. Because the present lagoon is inadequate, the Colorado State Health Department has issued a cease-and-desist order effective December 1, 1972. From the testimony of residents in the area, it is concluded that odor problems from the present lagoon do exist at certain times of the year. The present lagoon discharges to a marsh area which may aggravate the odor problems in the early spring. It is possible that the improved quality of effluent being discharged to the marsh will significantly reduce the odor problem. After a suitable operation period, the situation with respect to odors emanating from the marsh will be re-evaluated.

2. Objection:

The proposed expansion of the disposal facilities will further aggravate this situation as pertains to the health and esthetic environment of adjacent owners. Both the physical presence and the odor will deface the surrounding planned residential area.

Response:

As indicated in Section 1, the new proposed sewage treatment facility is designed to meet all current State, Federal and local regulations. The proposed facility will eliminate the present pollution problems associated with the present facility.

As indicated in Section 2, odor problems from the proposed facility are expected to be minimal.

As indicated in Section 2, the project will be designed to minimize aesthetic impacts as much as possible.

3. Objection:

The present lagoon was established in violation of land covenants for the area and abrogated the Pine Hills, Inc., published plans for a recreation area and swimming lake in the area.

Response:

The land covenants problem is a private legal issue to be resolved between the land owners and Pine Hills, Inc. Despite the outcome of this legal issue, the Woodmoor Sanitation District, Monument Sanitation District, and Palmer Lake Sanitation District have the power of condemnation.

4. Objection:

No other "green belt" has been planned for the general area. Such planning is now required by Colorado law. Location of a large sewage disposal facility will result in loss of esthetics to the natural beauty and wilderness state of the area and foreclose any possibility of use as a public park development. Discharge of effluent into Monument Creek at this point will foreclose for future generations the public use of these waters.

Response:

The PPACG has approved this proposed project as being consistent with the approved area land use plan. The proposed facility is designed to produce an effluent which will comply with Federal, State and local water quality standards. Accordingly, discharge of treated effluent to Monument Creek will not foreclose future public use of these waters.

5. Objection:

The adjacent land owners were not consulted prior to establishment of the present lagoon or during formulation of the Pike's Peak Area Council of Government's Water Quality Management Plan, dated August, 1971. Consequently, citizens are being confronted by an irreversible and irretrievable environmental action of substantial added impact to us, but with no voice in the proceedings or decision. This violates Public Law 91-190.

Response:

As indicated in Section 4, several meetings were held which discussed the location of a required facility at the Monument lagoon site. These meetings were advertised in appropriate newspapers and were well attended.

6. Objection:

The effects on residential growth in the immediate area have not been considered adequately. This residential area was developed to assure aesthetically and culturally pleasing surroundings for the healthful environment of the residents. Instead, in effect, the plan provides for three communities to transport their sewage as much as several miles for consolidated disposal in this planned residential area. Plans for the construction of homes in the immediate future by a member of the land owners have been placed in abeyance by this threat to the healthful and esthetically pleasing condition of the immediate environment. Complaints have been voiced directly to the Monument Sanitation Board, the Palmer Lake Sanitation Board and the Woodmoor Water and Sanitation Board, to no avail.

Response:

Again, this project has been approved by the PPACG as being consistent with land use plans for the area. There will be no threat to the public health from the operation of this proposed facility. We admit that individual sensitivities to odors and aesthetics may be offended by this project. However, we feel that the economic, social and environmental benefits from this proposed project far outweigh the detrimental effects.

7. Objection:

To the best of our research we can find no evidence of attempts at evaluation or consideration of alternatives to this situation. We propose that at least two alternatives be considered:

a. The communities involved adopt plans to dispose of their sewage within their own communities.

b. Evaluation of any consolidated sewage disposal facility should consider location to the south (down hill) on open ranch land which has not been previously platted and sold for residential development. This alternative would accomplish two purposes: (1) relieve the present unsatisfactory situation; (2) provide future consolidated sewage disposal for an enlarged area that will undoubtedly develop into residential housing in the near future. Adequate planning for such an area to include the sewage disposal facility could avoid the facility impinging on and destroying the aesthetic properties of such housing property.

Response:

As indicated in Section 4, many different alternatives were evaluated (including the suggested alternatives in (a) and (b) above) before selecting the proposed facility.

General Lenfest and the other property owners called upon EPA to prepare an environmental impact statement in accordance with NEPA. The negative declaration/environmental impact appraisal dated January 26, 1973, documented the reasons why EPA does not feel that an environmental impact statement is warranted by this proposed project. In a letter dated March 9, 1973, EPA received written objections to the project (copy attached) from General Lenfest. This revised environmental impact appraisal documents the reasons why EPA continues to feel that an environmental impact statement is not warranted by this project.

8. Agencies Consulted About The Project:

State Representative - Mr. Earl Balkum, District Engineer, Colorado Department of Health

Local Representative - Mr. J. R. McCammon, President, Palmer Lake Sanitation District

State Planning - Mr. Richard Brown, Principal Planner

Pikes Peak Area Council of Governments - Mr. M. J. Meehan, Executive Director

D. Reasons For Concluding There Will Be No Significant Impacts:

The degree of treatment and method of final disposal are consistent with State and Federal requirements, and will not interfere with the present or future use of Monument Creek. The location of the plant will not present a significant nuisance, flood hazard or significantly interfere with other activities in the area.

The physical alteration of the site is unobtrusive and will not present a significant aesthetic problem. The proper operation and maintenance of the system should minimize any detrimental odors. The area is not presently used as a park and the location of the proposed facility will not interfere with existing recreational uses of the area.

This project will not result in the displacement of any people.

The interceptor will not significantly affect presently undeveloped areas in terms of residential or commercial activities.

Based on the above, it has been determined that an Impact Statement is not required.

John A Green

John A. Green
Regional Administrator

APPENDIX D - ZONING REGULATIONS

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Zoning

OFFICE OF THE
[illegible] PASO COUN[illegible]

Mr. John A. Green
Regional Administrator
United States Environmental Protection Agency
1860 Lincoln Street
Denver, CO 80203

Dear Mr. Green:

This letter is verifying the zoning of Lots 17 and 18, Block 1, Pine Hills Subdivision, and Lot 3, Block 2, Pine Hills No. 4, amended plat within El Paso County. Lots 17 and 18 are zoned A-5 Farming District, and Lot 3 is zoned A-4 Farming District. Copies of the zones are enclosed.

The adjacent zoning to the above mentioned Lot 3 is A-4 Farming District. This zoning extends east to Interstate 25 three-fourths (3/4) mile, south to the United States Air Force Academy northerly boundary two (2) miles, and west to the Pike National Forest boundary two and one-half (2½) miles. Lots 17 and 18 and the adjacent zoning to the north to Monument Lake is A-5 Farming District.

If I can be of further assistance to you, please do not hesitate to contact me.

Sincerely,

John D. Fisher

John D. Fisher
Planner III

JDF/jw

Encl.

SECTION IX

430<

A-4 FARMING DISTRICT

USE: No building or land shall be used and no building shall hereafter be erected, converted, or structurally altered, unless otherwise provided herein, except for one of the following uses per lot:

USES (Regular Permit)

1. Agriculture
2. Churches (Cond. 4)
3. Dairying (Cond. 1)
4. Dwellings, Single (1 Family)
5. Farm
6. Fishing (Cond. 4)
7. Fur Farms (Cond. 3)
8. Golf Courses (Cond. 4)
9. Livestock Grazing (Cond. 1)
10. Mobile Home
11. Nursery Product & Stock (Cond. 4)
12. Parks (Cond. 4)
13. Poultry Farms (Cond. 5)
14. Ranches
15. Recreation Camp
16. Resorts
17. Stables (Cond. 1)
18. Truck Gardening

USES (Subject to County Planning Commission Approval of Location)

1. Emergency & Disaster Stations
2. Fire Departments, Volunteer
3. Mineral & Natural Resource Extraction (Cond. 2)
4. Schools, Private (Cond. 4)
5. Transmission Lines (High Voltage)

CONDITIONS

1. Permitted use provided that commercial stables are not on the premises. Private corrals or stables shall not be located closer than fifty (50) feet from any property line nor within two hundred (200) feet of any dwelling, school, church, eating place, intermittent or running, natural or artificial watercourse, and provided further that all stables and corrals shall be maintained in compliance with all lawful sanitary regulations.

2. Permitted use together with their accessory buildings, provided their surface operations are located at a distance of not less than two hundred (200) feet from any public highway, school, church, public park, or habitable dwellings except such dwelling or dwellings as may exist on the same property and are for use and operation of such mine, quarry, gravel pit, clay pit, gas or oil wells.

3. Permitted use where the operation of same is within the confined area of an enclosed building where artificial air conditioning is required.

4. Permitted use when suitable vehicular parking space shall have been provided as hereinafter required on the premises.

5. Permitted use provided that the kennels and pens shall be located not closer than one hundred (100) feet from any property line and shall conform with all lawful sanitary regulations.

PLATTING

All (A-4) Farming Districts must be platted if the major tract is divided into five (5) or more building sites, tracts, or lots.

MINIMUM LOT SIZE

AREA: Minimum lot area required: Five (5) acres.

Any construction shall be prohibited from occupying more than twenty-five (25) percent of said five (5) acres.

WIDTH: Minimum width of lot at building setback line: Two hundred (200) feet.

For every permitted use there shall be provided a lot area of not less than five (5) acres; provided, however, this requirement shall not be construed to prevent the erection or structural alteration of a dwelling or dwellings on such lot area, for occupancy by employees of the owner or tenant of the lot area, nor to prevent the erection or structural alteration of a dwelling or dwellings on the grounds of mines, quarries or gravel pits as may be required for occupancy by the employees thereof.

In the event that the land to be partitioned, platted and sold is burdened by a County Road on a Section line road along any of its sides then, and in that event only, the lot width requirement shall be 165 feet and the acreage requirement shall be 4.75 acres.

SETBACK REQUIREMENTS

FRONT YARD: Twenty-five (25) feet from front property line.

REAR YARD: Twenty-five (25) feet from rear property line.

SIDE YARD: Twenty-five (25) feet from side property line.

ACCESSORY BUILDINGS AND PRIVATE GARAGES

FRONT YARD: Twenty-five (25) feet from front property line.

REAR YARD: Twenty-five (25) feet from rear property line.

SIDE YARD: Twenty-five (25) feet from side property line.

It is further provided, however, that such detached, private garage or accessory building must be set back not less than five (5) feet from any dwelling.

MAXIMUM HEIGHT

The maximum height shall be thirty (30) feet or 2 1/2 stories.

BUILDING PERMITS

A permit shall be required for all structures. No building permit shall be issued for a dwelling unit with less than five (5) acres in lot area.

SECTION X

A-5 FARMING DISTRICT

USE: No building or land shall be used and no building shall hereafter be erected, converted, or structurally altered, unless otherwise provided herein, except for one of the following uses per lot:

USES (Regular Permit)

1. Churches (Cond. 4)
2. Clubs, Private (Cond. 3 & 4)
3. Dairying (Cond. 1)
4. Dwellings, Single (1 Family)
   Duplex (2 Family)
5. Farm
6. Fishing (Cond. 4)
7. Fur Farms (Cond. 6)
8. Golf Courses (Cond. 4)
9. Livestock Grazing (Cond. 1)
10. Mobile Home
11. Nursery Product & Stock (Cond. 4)
12. Parks (Cond. 4)
13. Poultry
14. Ranches
15. Recreation Camp
16. Resorts
17. Stables (Cond. 1)
18. Stands (For sale of agricultural produce) (Cond. 5)

USES: (Subject to County Planning Commission Approval of Location)

1. Dumping, Trash & Rubbish (Cond. 7)
2. Emergency & Disaster Stations
3. Fire Departments, Volunteer
4. Fish Hatcheries
5. Gas Regulator Stations
6. Hospitals (Cond. 4)
7. Institutions, Philanthropic and Eleemosynary (Cond. 4)
8. ✓ Landfills (Cond. 7 & 8)
9. ✓ Lumber Yards (Cond. 4)
10. Mineral & Natural Resourc Extraction (Cond. 2)
11. Sanitariums (Cond. 4)
12. Sawmills (Cond. 4)
13. Schools, Private (Cond. 4
14. Transmission Lines (High Voltage)

CONDITIONS

1. Permitted use provided that commercial stables are not on the premises. Private corrals or stables shall not be located closer than fifty (50) feet from any property line nor within two hundred (200) feet of any dwelling, school, church, eating place, intermittent or running, natural or artificial watercourse, and provided further that all stables and corrals shall be maintained in compliance with all lawful sanitary regulations.

2. Permitted use together with their accessory buildings, provided their surface operations are located at a distance of not less than two hundred (200) feet from any public highway, school, church, public park, or habitable dwellings except such dwelling or dwellings as may exist on the same property and are for use and operation of such mine, quarry, gravel pit, clay pit, gas or oil wells.

3. Permitted use provided that operation is only for the use and benefit of members or guests of such members.

4. Permitted use when suitable vehicular parking space shall have been provided as hereinafter required on the premises.

5. Permitted use provided that stands shall not be placed closer than thirty-five (35) feet from any highway right-of-way line.

6. Permitted use where the operation of same is within the confined area of an enclosed building, where artificial air conditioning is required.

7. Permitted use providing such yards and dumps conform with all lawful sanitary regulations. Rubbish or trash, produced on the premises by the owner other than as a commercial venture, may be dumped on his own premises without a permit, provided that such dumping is not carried on within one thousand (1000) feet of any federal or state highway nor within three hundred (300) feet of any other public highway or road.

8. REGULATIONS NECESSARY FOR THE OPERATION OF A LANDFILL FOR THE PUBLIC HEALTH, SAFETY AND WELFARE

   The applicant shall agree to the following regulations as a condition to the granting of the location by the County Planning Commission.

   a. The area shall be surrounded by a portable fence covering the immediate area.
   b. Refuse shall be covered by earth to a depth of 24 inches above the finished surface.
   c. Waste building material, concrete or other bulky waste shall not be used for the final surface or side slopes.
   d. The exposed surface shall be covered with six inches of earth at the close of each day's operation.
   e. The toe of any finished fill slope shall terminate in a sand and gravel filled ditch.

9. Permitted use provided that the kennels and pens shall be located not closer than one hundred (100) feet from any property line and shall conform with all lawful sanitary regulations.

PLATTING

All (A-5) Farming Districts must be platted if the major tract is divided into five (5) or more building sites, tracts, or lots.

MINIMUM LOT SIZE

AREA: Minimum lot area required: Five (5) acres.

Any construction shall be prohibited from occupying more than twenty-five (25) percent of said five acres.

WIDTH: Minimum width of lot at building setback line: Two hundred (200) feet.

For every permitted use there shall be provided a lot area of not less than five (5) acres; provided, however, this requirement shall not be construed to prevent the erection or structural alteration of a dwelling or dwellings on such lot area, nor to prevent the erection of structural alteration of a dwelling or dwellings on the grounds of mines, quarries or gravel pits as may be required for occupancy by the employees thereof.

In the event that the land to be partitioned, platted and sold is burdened by a County Road on a Section line road along any of its sides then, and in that event only, the lot width requirement shall be 165 feet and the acreage requirement shall be 4.75 acres.

SETBACK REQUIREMENTS

FRONT YARD: Twenty-five (25) feet from front property line.

REAR YARD: Twenty-five (25) feet from rear property line.

SIDE YARD: Twenty-five (25) feet from side property line.

ACCESSORY BUILDINGS AND PRIVATE GARAGES

FRONT YARD: Twenty-five (25) feet from front property line.

REAR YARD: Twenty-five (25) feet from rear property line.

SIDE YARD: Twenty-five (25) feet from side property line.

It is further provided, however, that such detached, private garage or accessory building must be set back not less than five (5) feet from any dwelling.

MAXIMUM HEIGHT

The maximum height shall be thirty (30) feet or 2 1/2 stories.

BUILDING PERMITS

A permit shall be required for all structures. No building permit shall be issued for a dwelling unit with less than five (5) acres in lot area.

APPENDIX E - FINANCIAL

The financial status of both the Palmer Lake Sanitation District and the Woodmoor Water and Sanitation District is poor. Both districts have large debt/assessed valuation ratios and substandard bond ratings. Chances of either of these districts selling new bond issues are considered very poor based on the public hearing testimony of Stern Brothers and Company, investment banking firm in Denver. Primarily this is because of a non-operating system and existing litigation in the case of Palmer Lake and publicity regarding the Woodmoor Corporation bankruptcy in the case of the Woodmoor District. Further testimony of Stern Brothers established that interest rates for these districts could be as high as 10 percent assuming bonds could be sold.

Estimated financial costs to the Palmer Lake Sanitation District have been developed for Sites 1 and 2 using cost figures developed by both CH2M and NHPQ for Site 2. Basic assumptions made in the analysis are as follows:

1. The Palmer Lake Sanitation District will have no revenues in calendar 1975. This is an assumption that makes the analysis more simple, but nevertheless reasonable as it is not sure when the system would be in service, though it should be prior to the end of 1975.

2. The interest that will have to be paid by Palmer Lake is 10 percent. This appears reasonable in view of the testimony by Stern Brothers and Company at the public hearing.

3. No payment on principal will be required in 1975 on the additional debt incurred by Palmer Lake to go to Site 2.

4. The Monument Sanitation District is assumed to participate in the move to Site 2.

5. No payment on principal will be required on current deficit of $45,000.

Using these assumptions, the 1975 mill levy for Palmer Lake is estimated to be 32.5 for Site 1 and 33.5 to 37.2 for Site 2. For property with an assessed valuation of $10,000, the annual sewer tax paid to the District would be approximately $325 for Site 1 and $335 - $372 for Site 2 as compared to a sum of $100 presently paid to the District on $10,000 assessed valuation.

The total annual cost for Site 1 is estimated to be $71,000 and for Site 2 the estimate ranges from $93,000 - $113,000.

SITE COMPARISON COSTS

PALMER LAKE SANITATION DISTRICT

Site 1 - Existing

	CH2M	NHPQ	
Plant Cost	$ 352,000	$ 353,000	(includes power to site, $1200)
Interceptors	-	-	
Contingency	35,000	35,000	
Total Construction	387,000	388,000	
Engineering & Legal	58,000	58,000	
Subtotal	445,000	446,000	
Land	18,000	18,000	
Other Engineering	10,000	10,000	
EIS	15,000	15,000	
TOTAL	$ 488,000	$ 489,000	

Site 2 - 1/2 mile downstream

	CH2M	NHPQ
Plant Cost	$ 420,000	$ 490,000
Interceptors	80,000	108,000
Power to Site	-	10,000
Access Road	-	36,000
Contingency	50,000	64,000
Total Construction	550,000	708,000
Engineering & Legal	83,000	129,000
Subtotal	633,000	837,000
Land	45,000	85,500
Other Engineering	30,000	10,000
EIS	15,000	15,000
TOTAL	$ 723,000	$ 947,500

SANITATION DISTRICT FINANCIAL STATUS

	1/ PALMER LAKE SANITATION DISTRICT	1/ WOODMOOR WATER & SANITATION DISTRICT	2/ MONUMENT SANITATION DISTRICT
Direct debt	$ 570,000	$ 2,108,000	$ 81,000
Assessed valuation	1,433,930	7,075,950	- 3/ N/A
Debt as percent of assessed valuation	39.8	29.8	- N/A
Levy	10 mills	10 mills	- N/A
Tax revenue assuming 100 percent collection	14,339.30	70,759.50	- N/A
1975 debt service	37,312.50	176,692.50	$ 20,000
Operating Revenues	No - requires 26.03 mill levy for 1975 debt service w/o revenue	Yes	Yes
Available authorized debt	No	Yes - would have to revote for issuance over 6%	No
Chances of favorable vote on new bond issue	Slim to none	Slim to none	Almost nil
Chances of selling new issue	Slim to none-due to non-operating system and publicity on law suit	Slim to none-due to publicity re Woodmoor Corp. bankruptcy	Very slight
Bond rating	Substandard	Substandard	Good
Interest rate on present bonds	Less than 6-3/4%	4% - 6%	4-5/8%

1/ Figures obtained from Richard W. Blackwood, Stern Brothers Co., Denver
2/ Figures obtained from Don L. Brown, Chairman, Monument Sanitation District
3/ Not applicable - Monument Sanitation District is not on a mill levy

ESTIMATED PALMER LAKE SANITATION DISTRICT MILL LEVY IF SITE I IS SELECTED

Item	
Total Cost (including environmental assessment)	$ 488,000
Less ineligible cost (land)	18,000
Eligible Cost	470,000
Grants - 80% (75% EPA, 5% Colorado	376,000
Local Share of Eligible Cost	94,000
+ Land Cost	18,000
Total Local Cost	112,000
Palmer Lake Share (3/7 of total local cost)	48,000
Engineering & Legal ($58,000 in engineering costs have already been paid, therefore no additional cost)	0
Total estimated additional cost to Palmer Lake Sanitation District	48,000
Assessed Valuation	1,433,930
Present Mill Levy	10
Tax Revenue (assumes 100% collection)	14,339
1975 Debt Service	
1. Existing debt only	37,312
2. Additional debt service (assume i = 10% and no principal payment)	4,800
3. Interest on PLSD deficit of $45,000 as of October 1974 (assume i = 10% and no principal payment)	4,500
Total 1975 Debt Service	46,612
Required Mill Levy (w/o Revenues)	32.5

ESTIMATED PALMER LAKE SANITATION DISTRICT
MILL LEVY IF SITE 2 IS SELECTED

Item	CH2M	NHPQ
Total Cost (including environmental assessment)	$ 723,000	$ 947,500
Less ineligible cost (land)	45,000	85,500
Eligible Cost	678,000	862,000
Grants - 80% (75% EPA, 5% Colorado)	542,000	690,000
Local Share of Eligible Cost	136,000	172,000
+ Land Cost	45,000	85,500
Total Local Cost	181,000	257,500
Palmer Lake Share (3/7 of total local cost)	77,500	110,000
Engineering & Legal		
1. Less 3/7 of approximately $58,000 in engineering costs which have already been paid for Site 1	24,900	24,900
Sub Total	52,600	85,100
2. Add 3/7 of 83,000 -58,000 = 25,000 for Site 2	10,700	
	63,300	
3. Add 3/7 of 129,000 -58,000 = 71,000 for Site 2		30,400
		115,500
Estimated Additional Cost to Palmer Lake for Site 2	63,300	115,500
Assessed Valuation	1,433,930	1,433,930
Present Mill Levy	10	10
Tax Revenue (assumes 100% collection)	14,339	14,339
1975 Debt Service		
1. Existing Deby Only	37,312	37,312
2. Additional debt service for Site 2 (assume i = 10% and no principal payment)	6,330	11,550
3. Interest on Palmer Lake Sanitation District District deficit of $45,000 as of October 1974 (assume i = 10% and no principal payment)	4,500	4,500
Total 1975 Debt Service	48,142	53,362
Required Mill Levy (w/o revenues)	33.5	37.2

ESTIMATED ANNUAL COST FOR

SITES 1 AND 2

	SITE 1	SITE 2	
		CH2M	NHPQ
Total Cost	$ 488,000	$ 723,000	$ 947,500
1/ Annual Capital Cost	46,100	68,200	88,400
Annual Operation and Maintenance Cost	25,000	25,000	25,000
Total Annual Cost	71,100	93,200	113,400
Rounded to	$ 71,000	$ 93,000	$ 113,000

1/ Based on 20-year capitalization at 7 percent

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BANK of WOODMOOR

April 30, 1974

Col. Joseph R. McCammon
President
Palmer Lake Sanitation District
P.O. Box P
Monument, Colorado 80132

Dear Col McCammon:

In response to your recent request as to the extension of credit to the Palmer Lake Sanitation District in the amount of $375,000.00, I must respectfully decline any extension at this time.

I am holder of several of your recent issue of bonds, and in comparing the previous financial statements to the current data, I find that the district could not support a Bank loan of the size requested. A great deal of the future credit support will be determined when the district is able to produce revenue. As of the current time the revenue has not accurred, I assume, due to the litagation currently in progress. In answer to your question of if the Bank could and would make a loan to the district of the size mentioned, how much would be charged, the answer is 8.00% simple interest per annum.

I do hope that I have properly answered your question to the credit extension, please give me a call if you need further data; if I can be of any assistance in your plans I would be pleased to assist.

Sincerely,

Charles W. Derby

Charles W. Derby
Executive Vice President

PHONE 481-2278

1756 LAKE WOODMOOR DRIVE

MONUMENT, COLORADO 80132

445<

CHICAGO
OMAHA
ST. LOUIS
ALBUQUERQUE

TELEPHONE
292-1150

INVESTMENT
BANKERS

SBC

main office
1009-15 Baltimore Avenue
Kansas City, Missouri 64105

STERN BROTHERS & CO.
638 AMERICAN NATIONAL BANK BUILDING • DENVER, COLORADO 80202

April 29, 1974

Colonel Joseph R. McCammon, Chairman
Palmer Lake Sanitation District
Palmer Lake, Colorado 80133

Dear Colonel McCammon:

This letter will confirm our telephone conversation today wherein, reluctantly, I stated that "without a successful bond election and also without a considerable increase in the assessed valuation of property within the limits of Palmer Lake Sanitation District, Stern Brothers & Co. could not consider any additional loan to the District in the foreseeable future".

Please, Colonel McCammon, keep us in mind, however, when additional financing needs arise after your District has increased in valuation.

Sincerely,

STERN BROTHERS & CO.

Richard W. Blackwood

Richard W. Blackwood
Vice President

RWB:CC

APPENDIX F

LANDSCAPING

Oc October 7, 1974, EPA wrote to Mr. Joseph R. McCammon, President of the Palmer Lake Sanitation District and requested the District to prepare and submit to EPA a visual analysis plan for Site 1. A copy of this letter is included in this Appendix. The District responded to that request on October 28, 1974, by submitting to EPA a visual analysis plan which included a textual discussion, exhibit 1 consisting of five graphic illustrations, and an architectural rendering of the proposed project at Site 1. All of this material is included in this Appendix.

The architectural rendering of the proposed project at Site 1 was prepared from a photograph taken from viewing position F (Exhibit 1). This rendering is not a complete representation of what the proposed project would look like at Site 1.The small buildings and a service walkway to the center of the northern most lagoon are not shown. None of the proposed preliminary planting or landscaping measures discussed in this Appendix are shown in the rendering. It is EPA's judgment that the proposed preliminary planting and landscaping plans presented in this Appendix will improve the aesthetic impact of this project.

The EPA grant for this proposed project includes a condition that final landscaping plans are subject to the approval of EPA, These final landscaping plans will be available for public comment before final EPA approval.

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OCT 7 1974

Ref: 8FE

Mr. Joseph R. McCammon
President
Palmer Lake Sanitation District
P.O. Box 687
Palmer Lake, Colorado 80133

Dear Mr. McCammon:

We have carefully reviewed the hearing testimony and the comments which we received on the draft environmental impact statement for the Palmer Lake Sanitation District. The human and aesthetic factors have been given considerable weight in our decisions on this project. If site 1 is to be our final choice upon completion of the NEPA process, every reasonable measure must be taken to mitigate the aesthetic impact of this proposed project. Neither NMPQ nor CH2M-Hill has given enough attention to the mitigation of aesthetic impacts.

Accordingly, you are requested to submit to EPA a detailed visual analysis plan for mitigating the aesthetic impacts of locating the proposed project at site 1. This plan must include the following:

1. A detailed discussion of the visual impact of the proposed lagoon system investigating the following factors for critical viewing locations:
    a. Whether the view is clear or obstructed (topography, vegetation)
    b. The position of viewing (elevation)
    c. The distance of the viewer from the project (range of viewing)
    d. Whether the viewer is standing still or moving (land use)
    e. The attractiveness of the project
    f. The viewers concentration on the view
    g. The time of day
    h. Weather conditions
    i. The number of persons viewing the project.
2. Detailed design and landscaping specifications for project lagoons, buildings, equipment, fences, roadways, channelization and other features including a discussion of colors, texture, materials, vegetation, profiles and visual harmony.

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3. An architectural rendering of the project as viewed from those areas which would be visually impacted. The rendering should be in color and be reproducible for inclusion in the final EIS.

We are presently preparing the final EIS and expect to distribute it for public review by mid-October. Your visual analysis plan will have to be submitted to us by October 18, 1974, so that we can include it in the final EIS.

My staff is available any time to consult with you on this matter.

Sincerely yours,

ORIGINAL [illegible]
DONALD [illegible]

Donald P. Dubois
Deputy Regional Administrator

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ENGINEERING NHPQ CONSULTANTS
NELSON, HALEY, PATTERSON and QUIRK, INC.
102 NORTH CASCADE AVENUE COLORADO SPRINGS, COLORADO 80902
SUITE 202 303/475-7660

October 28, 1974

Mr. John Green
Regional Administrator
Environmental Protection Agency
Region VIII
1860 Lincoln, Suite 900
Denver, Colorado 80203

Gentlemen:

Transmitted herewith is the information requested in your letter dated October 7, 1974.

If further information is required, please so advise.

Very truly yours,

NELSON, HALEY, PATTERSON, and QUIRK, INC.
Colorado Springs, Colorado

Gary R Windolph
Gary R. Windolph, P.E.
General Manager

Palmer Lake Sanitation District

Joseph R McCammon
J. R. McCammon
President

DRAFT (1)

VISUAL IMPACT OF THE PROPOSED PROJECT

A. GENERAL. The proposed project is located along and adjacent to the east bank of Monument Creek, approximately 2 miles south of the Town of Monument, Colorado. Local topographic features limit the geographic area which will be visually impacted to the area or delineated on Exhibit I.

Observers of the project will include those people presently occupying homes within this area, individuals driving through the area, individuals visiting homes located within the area, and those who may chose to build homes within the affected area in the future. Discussions of the visual impacts to each of the above categories follow in later paragraphs.

PROJECT VISUAL FEATURES.

A. GENERAL. The proposed project consists of the construction of two earthen basins, three buildings, and miscellaneous surface piping and equipment. The earthen basins are each approximately 350 feet long by 300 feet wide and are designed to be filled with liquid wastes. The three buildings are approximately 10 feet long by 7 feet wide, and are approximately 8 feet in height. At the present time, an existing basin approximately 310 feet long by 300 feet wide is located adjacent to, and south of the proposed project. This structure is to remain, and will be incorporated into the total facility.

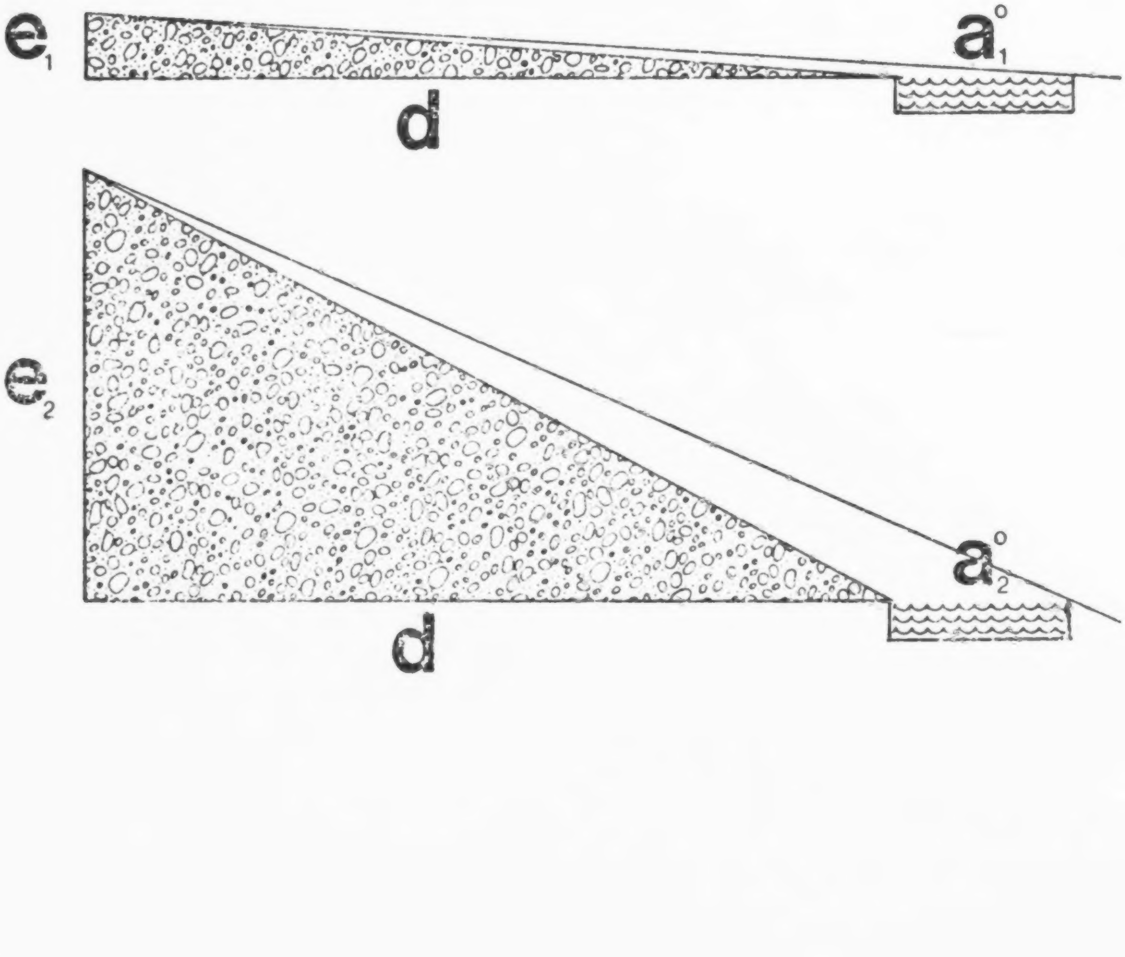
Prominent visual features will include approximately 6.8 surface acres of water, three small buildings, project fencing, and approximately 1200 lineal feet of flood protected embankments.

The visual impact of each of these features will vary depending upon viewing position, time of day, weather conditions, and whether the viewer is stationary or moving.

B. VIEWING POSITIONS. Two items must be considered with respect to viewing position, 1) the distance from the site and the relative elevation of the viewer. This is obviously assuming that the viewing position is from within the affected areas, as delineated on Exhibit 1.

The relationship between the distance of viewing and elevation of viewer can be graphically explained as follows:

a. The cone of vision increases with the increase in elevation (e). The distance (d) is being constant.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d

The major project feature which is affected the greatest by this relationship is the surface area of the proposed ponds. Obviously, from the north facing slopes located within the affected areas, the clarity of perception will be higher from viewing positions D, E, F (Exhibit I) than from A or B. Obviously, from viewing position B, this project feature cannot be observed since B is at an elevation lower than the pond surface. The clear-predominant view of this feature is best illustrated in Exhibit II, a view from the vicinity of viewing position F (Exhibit I).

The primary consideration for the viewing effect of the buildings is one of distance alone. Due to the relatively small size of the proposed buildings, if finished with earth tone colors consistent with the surrounding landscape, they will tend to blend and reduce in significance as distance increases. The visual impact of this feature will also be substantially reduced by breaking of the profile through the use of trees and other landscaping features.

Due to the location of the earthen embankment and its profile (2:1 slope), the elevation of the viewer will not materially affect the visual impression. Distance from the embankment will be the primary factor affecting the view. The embankment will be observable from the southwest and northwest quadrants of the affected area. The major effect of the viewers elevation will be only in a small reduction in observable embankment from lower elevations due to the interception of the line of sight due to the west embankment of Monument Creek. The major visual concern will be the uniformity or artificiality of the embankment top. This effect can be reduced somewhat by the planting of trees along the lower west face which will aid in interrupting the linear nature of the feature. Use of properly colored flood protection material will provide a blending effect at greater distances,further reducing the obviousness of this feature.

The impact of the proposed chainlink type fence will vary significantly with respect to the viewer's position. Chainlink type fence, when viewed at close range, contrasts with the natural environment in material, color, and shape. However, due primarily to a lack of surface area as distance increases, the visual significance decreases substantially. Consequently, chainlink type fence along the south and west boundaries would have little visual impact. An unpainted wood fence (see drawings) could be located along Mitchel and Arnold Avenues, where close range visual frequencies will be at a maximum .

VIEWING FROM A MOVING POSITION

Site investigation has revealed that due to the relative difference in elevation, the north facing hillside (between 6,960 feet and 7,000 feet) will be substantially impacted (see rendering).

Significant mitigation can be achieved by the sensitive site planning of new dwelling units and orientation and utilization of existing pine trees as a screening element.

The visual impact and/or image or impression of the project has to be considered also in case of perception of the project from a moving vehicle.

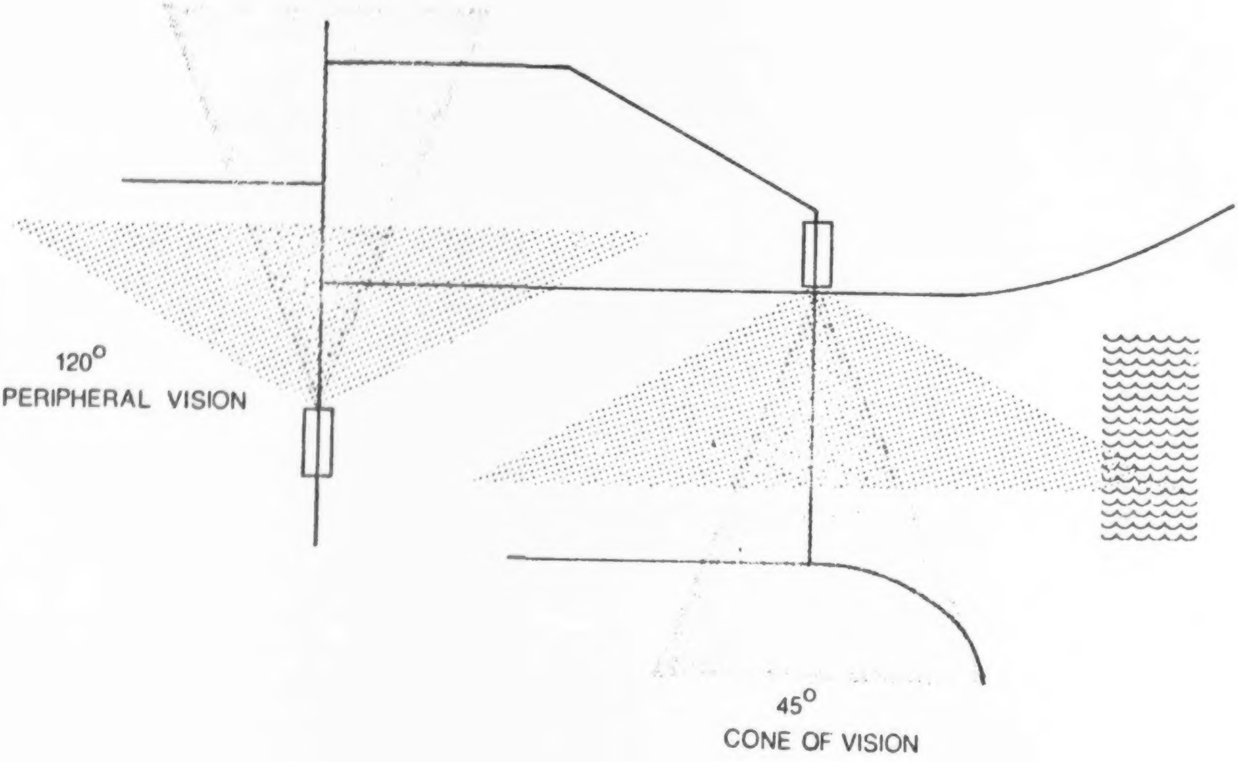
There are three phenomena which will influence the clarity of perception in this case:

a. Relative angle relationship between the roads and proposed lagoons.
b. Speed of the moving vehicle.
c. Horizontal profile of the roadway.

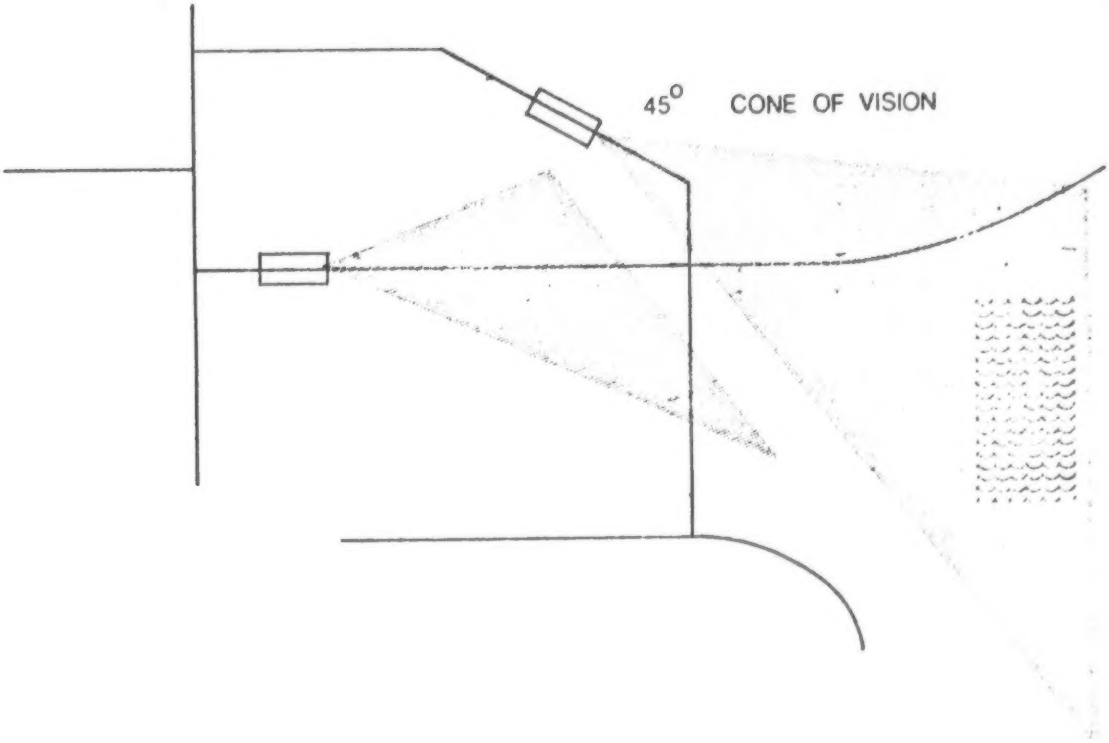
Following is a more detailed exploration of the above listed phenomena:

a_1. The roads are parallel to the lagoons, in which case the perception of the project will be minimal or none, meaning that the visual image of the project will reach only the peripheral vision of the driver.

DRAFT (6)


120°
PERIPHERAL VISION
45°
CONE OF VISION

a_2. The roads are perpendicular or near to a 90° angle to the lagoons, in which case the visual image of the proposed lagoons will appear within the scope of the cone of vision.

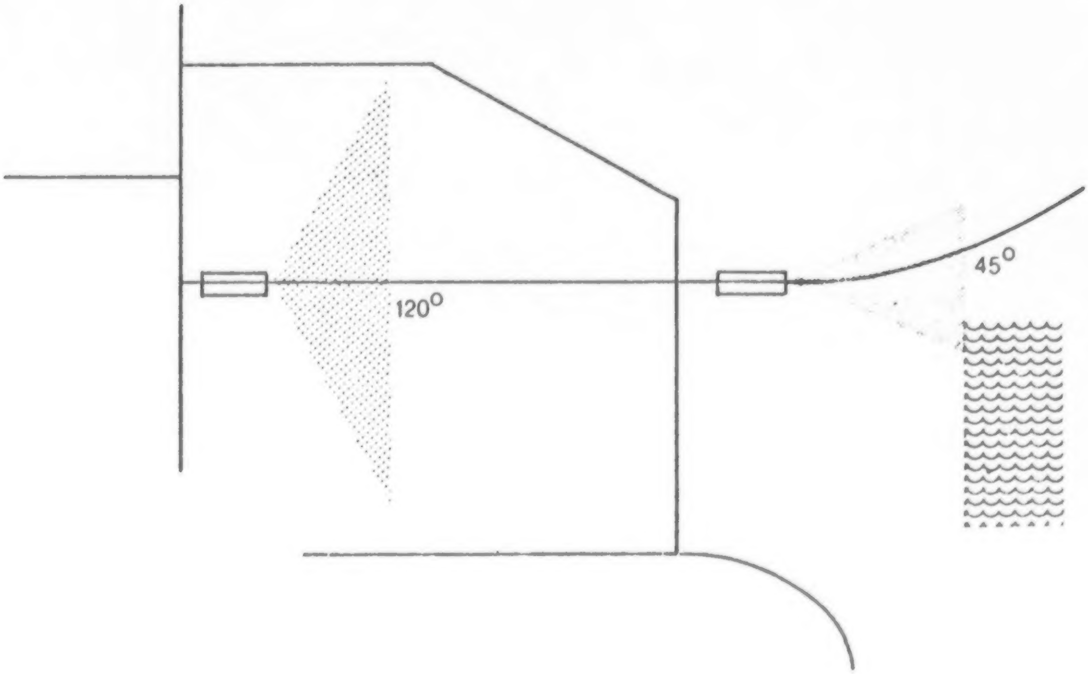


b. There are five principles on the effects of speed on vision of the driver. As speed increases:

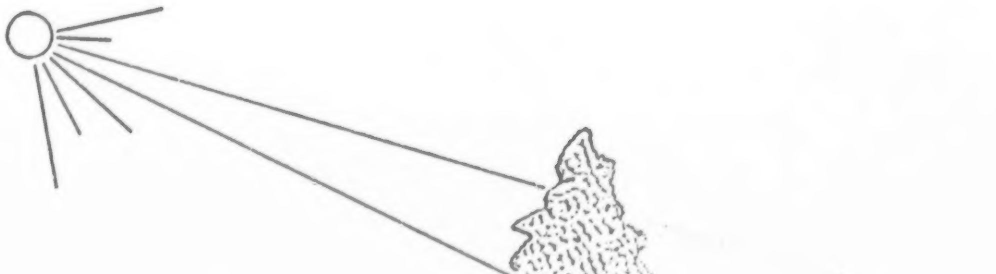
- concentration on driving increases
- the point of concentration recedes
- peripheral vision diminishes
- foreground detail fades increasingly
- space perception becomes impaired

c. Horizontal profile of the roadway will influence driving concentration, peripheral vision, and space perception. Concentration on driving will increase and peripheral vision will diminish as the roadway will be changing from a line to a curve profile.

DRAFT (8)



The time of day and weather conditions will effect the reflection and shadow patterns on the lagoon surfaces.



Potential observation of the facility from moving vehicles is considered to be at a minimum due to the relative distances from the proposed project and the high degree of driving concentration required due to the low road design standards of the area. Roadways are gravel only, have short sight distances, and are relatively narrow, all which contribute to the level of required driver concentration. The traffic passing closest to the facility (along Mitchel Avenue) will not be able to view a majority of the facility due to the low road elevation, but will observe the embankment to the extent of the low angular view permitted from this point.

WEATHER CONDITIONS AND TIME OF DAY

The major weather condition affecting the visual impacts of the proposed project is the amount and duration of snow cover during the winter months. Cold weather temperature extremes are also an interrelated factor. During periods of snow cover with moderate temperatures, the ponds will not be ice covered, consequently the ponds will become a predominate part of the view. The buildings will also be more noticeable as the colors will be selected to harmonize with the summer colors. During periods of extreme cold weather the ponds will become ice covered and during these periods, visual impacts will be at their lowest level.

Other weather conditions are essentially insignificant due to short durations (snowstorms, fog, etc.) Cloud cover will reduce the color contracts of the reflective pond surface. Eastern sunlight will increase the reflective effect of the pond surface, but decrease the fence, embankment, and building significance. The reverse would be true during afternoon and evening sunlight patterns. Cloud cover would significantly reduce the visual impact as compared to cloudless days.

VIEWING FREQUENCIES

The proposed project, upon completion, will be observable from approxmately 25 residential homesites. At the present time there are 4 homes constructed in the area, from which the facility will be observable, from some portion of the property. Depending upon where the home is located on the property, the view of the facility may be either clear or obstructed. Careful placement of new homes on the presently unoccupied lots could result in minimum visual effects from within the dwelling.

With the exception of a small portion of undeveloped property located south of the proposed facility, all land within the area of visual impact has been developed. Consequently, the future veiwing frequencies have been established to the degree of predictability of future residential home construction on the existing lots.

Viewing frequencies by present and future occupants of these homes cannot be established. Statistically, it would be impossible to make such a determination because of the high number of variables which would have to be considered, i.e., location of windows, decks, et cetera, living habits, other available views, et cetera. The only determinations with respect to viewing frequency from stationary positions are those previously cited, i.e., it will be observable from 4 existing homes and 25 homes which may be constructed in the future.

Observation frequencies from moving vehicles also cannot be accurately quantified. Generally, there will be a relatively minor number of such observations as the surrounding area is presently sparsely populated and due to the type of development, (large lots) will remain low density. The facility is not observable from any major vehicular roadway such as Interstate 25 or other state highways.

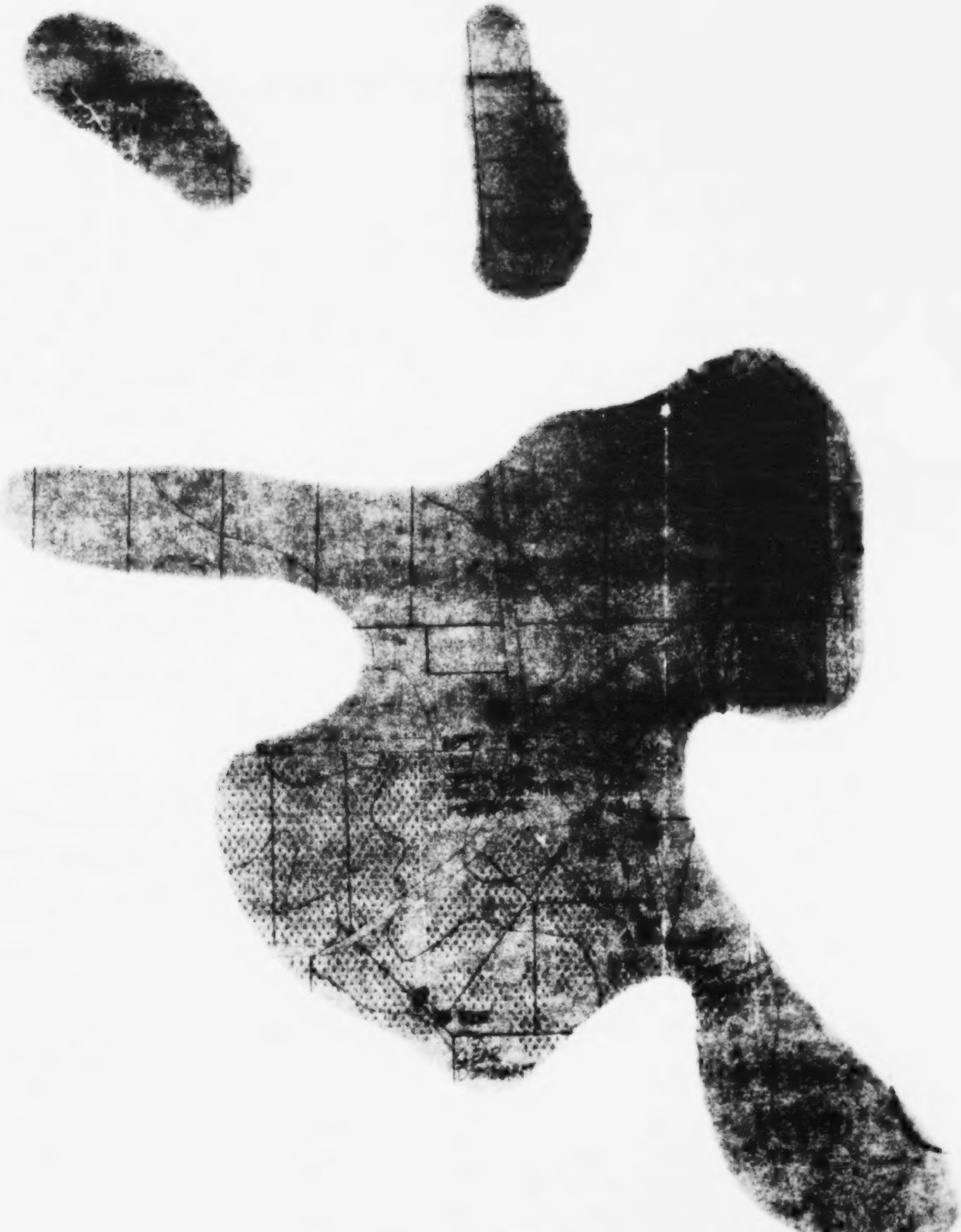
LANDSCAPING PLANS

The proposed landscaping plans were designed to minimize the visual impacts of the proposed project. Specifically, vegetation is being proposed to provide visual and natural "breaks" in the linear features of the project, i.e., embankment top, buildings, and water surface. The proposed plan is schematic in nature and is intended to provide a generalized overall concept of the type of improvements proposed to provide a facility of overall pleasing appearance.

The single most difficult area to deal with is the modifications within the Monument Creek bed itself. Visual concerns in this area are short range views, but are substantially affected by the hydraulic design requirements imposed upon the project. Should flow capacity requirements be reduced to those quantities which can pass Arnold Avenue, substantial improvements could be made. Such alternate considerations are shown in the attached exhibits.

ARCHITECTURAL RENDERING

The Architectural rendering was prepared from a photograph taken from viewing position F (Exhibit I). The rendering was designed to present the most realistic project appearance, consequently the proposed landscaping was not superimposed in the facility improvement. To do so would have materially detracted from the realism of the Exhibit.



THE VISUAL IMPACT STUDY OF THE PROPOSED PALMER LAKE SANITATION SYSTEM

NOTES:

1. IN GENERAL THE SURROUNDING LANDSCAPE HAS RETAINED A NATURAL APPEARANCE SINCE ONLY A SMALL PERCENTAGE OF ADJOINING SUBDIVISION HAS BEEN DEVELOPED

2. THERE ARE BASICALLY THREE PLANT ASSOCIATIONS NATIVE TO THIS AREA RIVER FLOOD PLAIN SHRUB COMMUNITIES DRY MEADOW AND MESA GRASSLANDS AND CHAPARRAL FOOTHILLS FOREST AND SHRUB COMMUNITIES.

   THE VISUAL IMPACT OF THE PROPOSED PONDS CAN BE SUBSTANTIALLY MITIGATED FROM MOST VIEWING POSITIONS THROUGH THE USE OF INDIGENOUS PLANTS UNSTAINED WOOD FENCES AND EARTH TONED COLORS

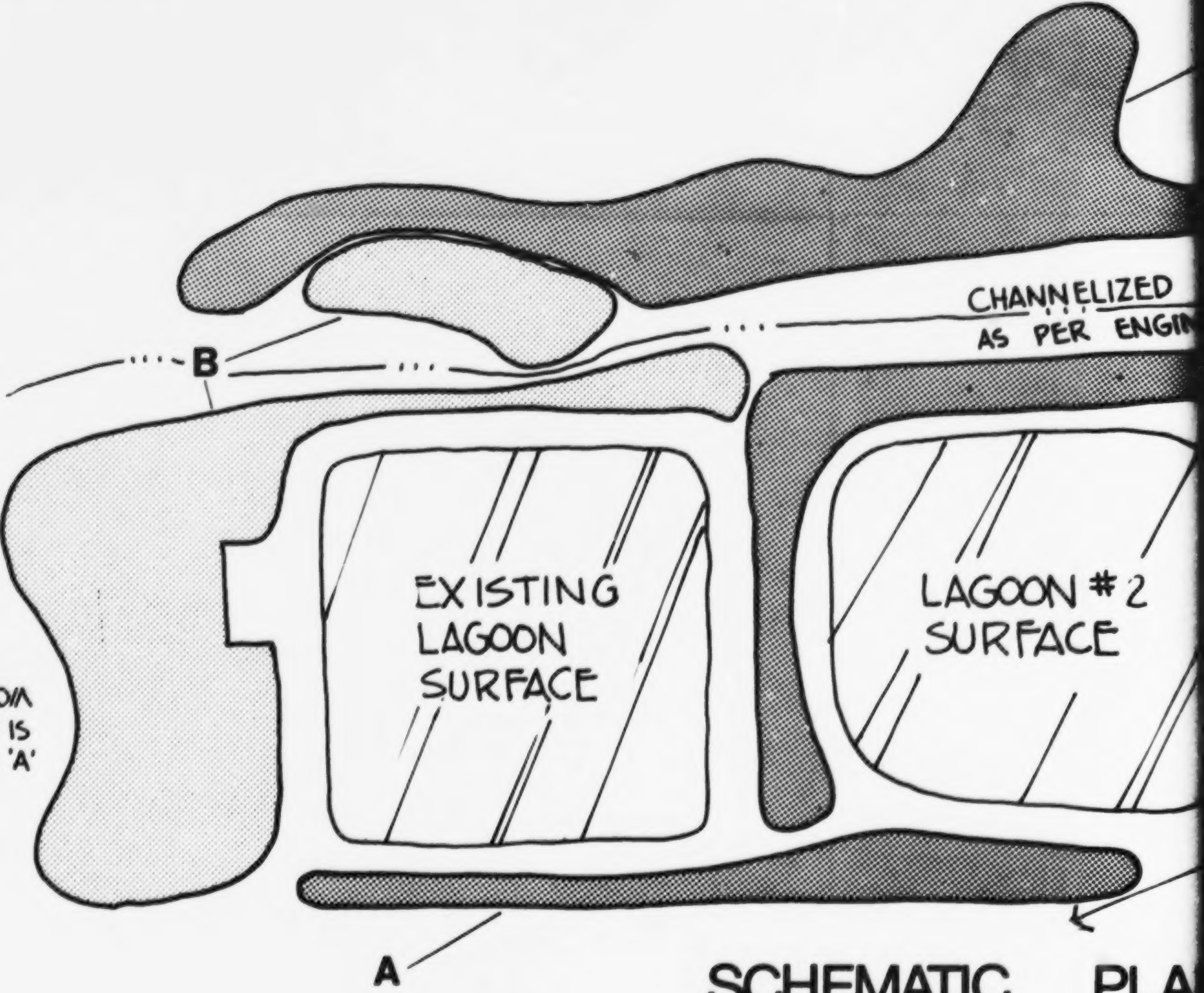
3. THE AREA OF PROJECT VISUAL CONCERN SIGNIFIES THE AREA OF THE PROJECT VISUAL IMPACT AND/OR THE POSITIONS OF VIEWING FROM WHICH THE VIEWER STANDING STILL OR MOVING CAN POTENTIALLY SEE THE SITE OF THE PROPOSED LAGOON SYSTEM

LEGEND

● – THE LOCATION OF VIEWING AND [illegible]
[illegible] – THE DISTANCE OF THE [illegible]
[illegible] – QUALITY OF VIEW [illegible]
– [illegible] TO TOPOGRAPHY OR VEGETATION
[illegible] – [illegible] OF PROJECT VISUAL IMPACT AND MITIGATION

[illegible]

EXHIBIT I


CHANNELIZED
AS PER ENGIN
B
EXISTING LAGOON SURFACE
LAGOON #2 SURFACE
A

IF SEEPAGE FROM
EXISTING POND IS
REMEDIED USE 'A'
PLANT LIST

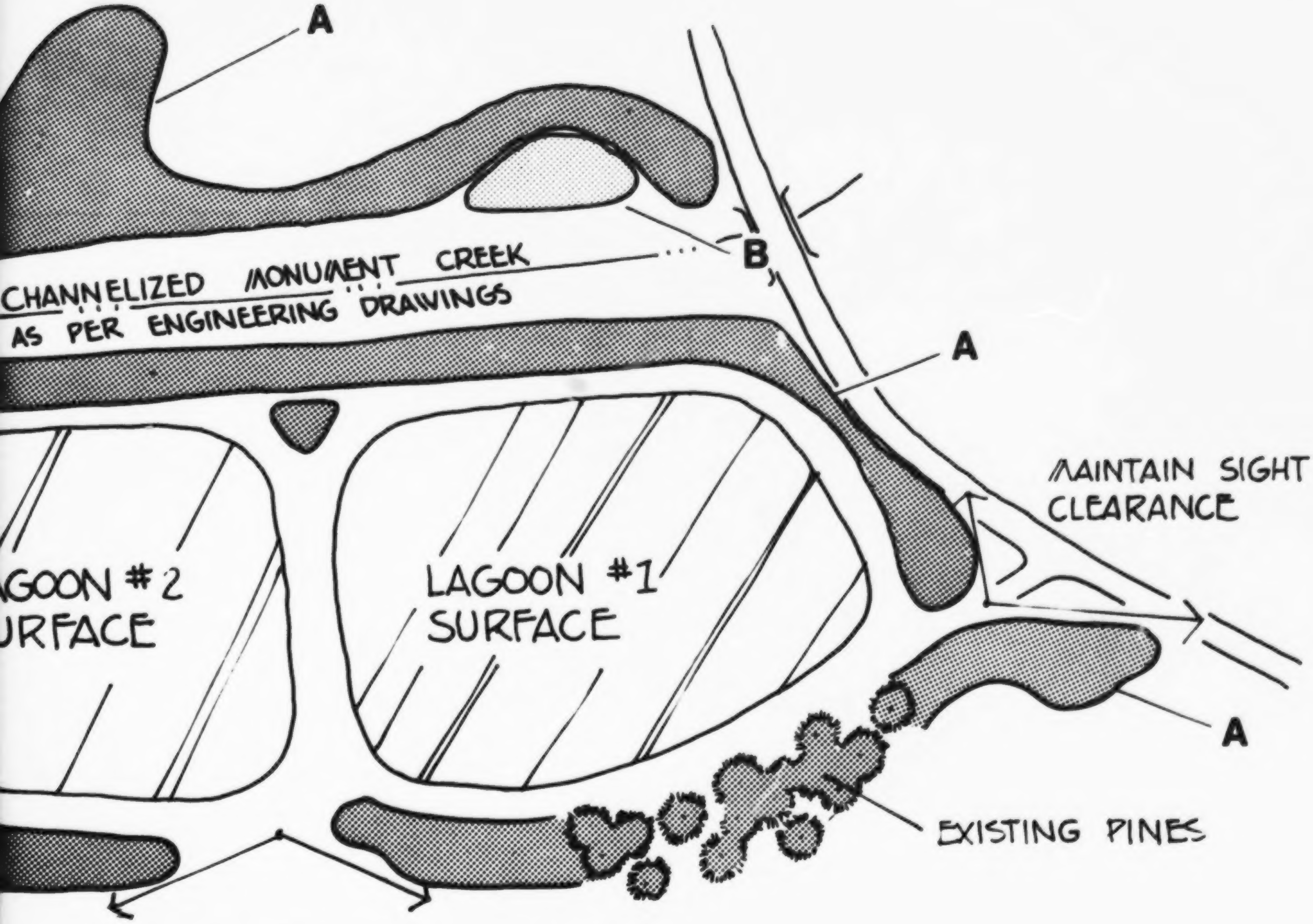
SCHEMATIC PLA

SCALE: 1" = 100'

PLANT

A XEROPYTIC TYPE PLANTS

BOTANICAL NAME	COMMON NAME	BO
ARCTOSTAPHYLOS UVA-URSI	BEARBERRY	AC
ARTEMISIA LUDOVICIANA	PRAIRIE SAGE	PAR
BUCHLOE DACTYLOIDES	BUFFALOGRASS	POP
BOUTELOUA CURTIPENDULA	SIDEOATS GRAMA	PRU
B. GRACILIS	GRAMA GRASS	P.
CERCOCARPUS MONTANUS	MOUNTAIN MAHOGANY	SA
JUNIPERUS SCOPULORUM	ROCKY MOUNTAIN JUNIPER	S.
PINUS PONDEROSA	PONDEROSA PINE	S.
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	S.
QUERCUS GAMBELLII	GAMBELL'S OAK	S.
YUCCA GLAUCA	YUCCA	VIT

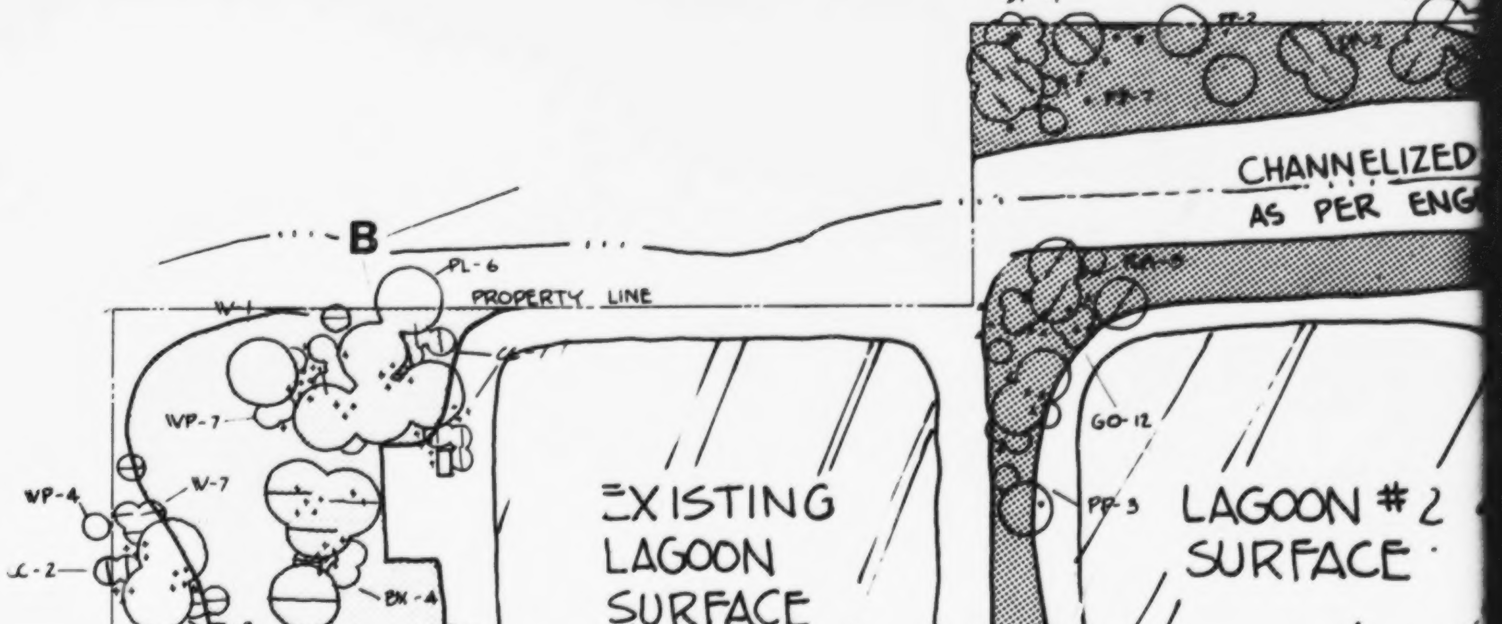

A
B
CHANNELIZED MONUMENT CREEK
AS PER ENGINEERING DRAWINGS
A
MAINTAIN SIGHT
CLEARANCE
GOON #2
URFACE
LAGOON #1
SURFACE
A
EXISTING PINES

IC PLANTING PLAN

ANT LIST

B MESOPHYTIC TYPE PLANTS

ME	BOTANICAL NAME	COMMON NAME
	ACER NEGUNDO	BOXELDER
GE	PARTHENOCISSUS ENGELMANNI	ENGELMANN VIRGINIA CREEPER
	POPULAS SARGENTII	PLAINS POPLAR
RAMA	PRUNUS AMERICANA	WILD PLUM
SS	P. VIRGINIANA VAR. MELANOCARPA	CHOKECHERRY
MAHOGANY	SALIX CAUDATA	CAUDATE-LEAVED WILLOW
AIN JUNIPER	S. MONTICOLA	MOUNTAIN WILLOW
PINE	S. PLANIFOLIA	NELSON WILLOW
R	S. SCOULERIANA	SCOULER WILLOW
OAK	S. SUBCOERULEA	SILVER PUSSY WILLOW
	VITIS SP.	RIVERBANK GRAPE


DF-4
PP-2
PP-2
PP-7
CHANNELIZED
AS PER ENG
B
PL-6
PROPERTY LINE
W-1
RM-6
CC-1
WP-7
GO-12
EXISTING LAGOON SURFACE
LAGOON #2 SURFACE
WP-4
W-7
PP-3
CC-2
BX-4
PL-2
WP-11
CC-7
PP-3
PL-4
RA-2
MM-1
GO-15
PP-5
DF-5
GO-6
A

PRELIMINARY PLANTI

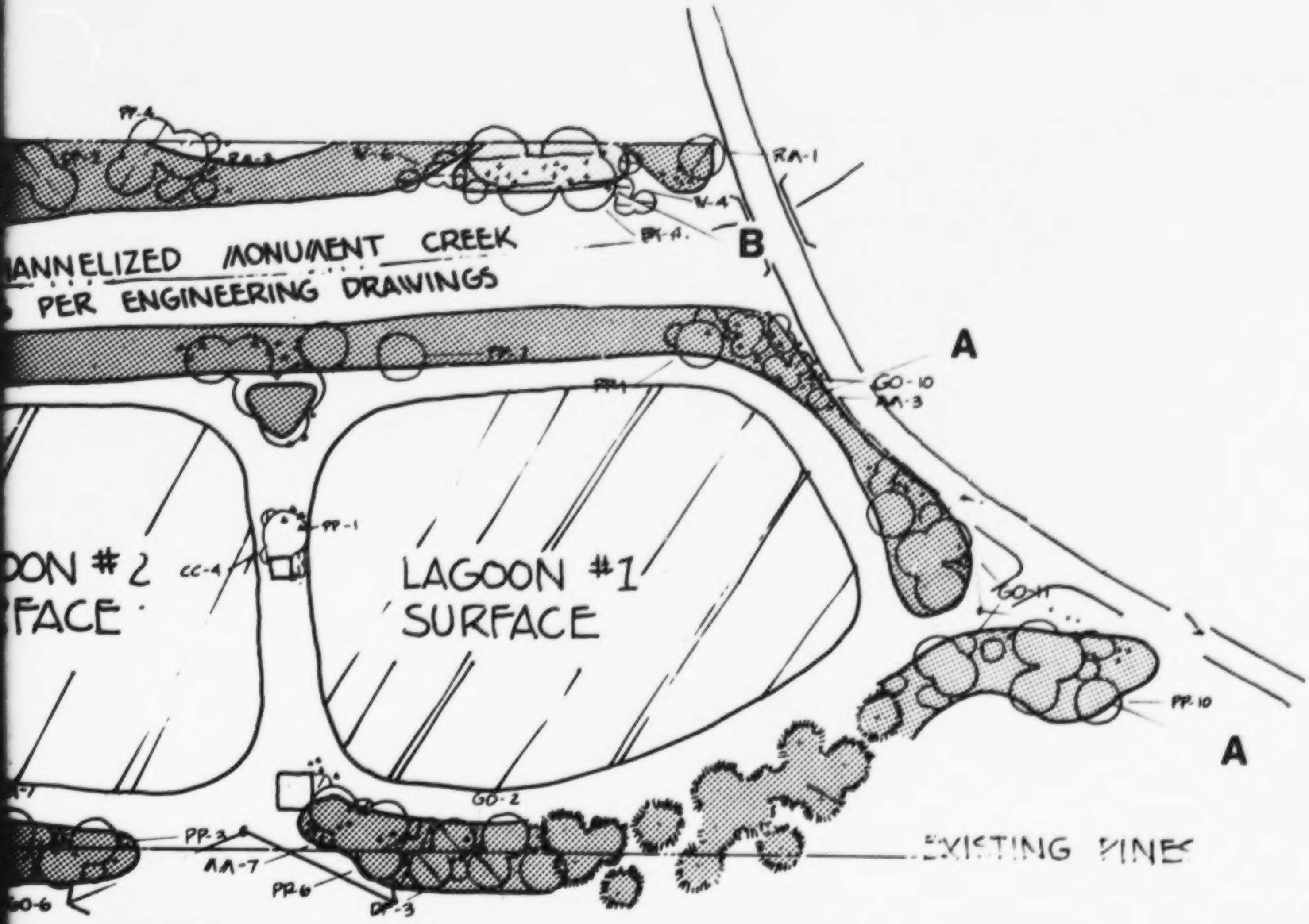
SCALE: 1" = 60'

PLANT LIST

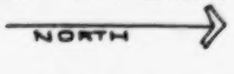
SYMBOL	COMMON NAME	AVE. SIZE	QUANTITY
TREES			
BX ⊖	BOXELDER	1"-1½" CAL.	8
DF ⊘	DOUGLAS FIR	4'-6' HT.	14
PL ○	PLAINS POPLAR	1"-1½" CAL	12
PP ○	PONDEROSA PINE	8'-10' HT.	45
RM ⊘	ROCKY MT. JUNIPER	4'-6' HT.	7
SHRUBS			
CC ⦶	CHOKECHERRY	4'-6' HT	20
GO ○	GAMBELS OAK	12"-18" HT	56
MM ⊘	MOUNTAIN MAHOGANY	15"-18" HT	19
PS ○	PRAIRIE SAGE	15"-18" HT	7
WP ○	WILD PLUM	18"-24" HT	22
W ⊖	WILLOW	18"-24" HT	18

SYMBOL
G
BB ⁘
EV ⁘
Y ⁘
BG
GG
SG

* ALL DISTURBE
SHALL BE S
(SEE LANDSCAP


PP-4
RA-2
RA-1
W-4
PP-4
B
HANNELIZED MONUMENT CREEK
PER ENGINEERING DRAWINGS
A
PP-1
PP-1
GO-10
RA-3
PP-1
CC-4
OON #2
FACE
LAGOON #1
SURFACE
GO-11
PP-10
A
GO-2
EXISTING PINES
PP-3
RA-7
PR6
PP-3
GO-6

PLANTING PLAN



LIST

SYMBOL	COMMON NAME	AVE SIZE	QUANTITY
	GROUND COVER		
BB ∴	BEARBERRY	1 GAL.	50
EV ∴	ENGELMANN VIRGINIA CREEPER	1 GAL.	114
Y ∴	YUCCA	1 GAL.	88
	GRASSES+		
BG	BUFFALOGRASS	70% GERM	64# / ACRE
GG	GRAMA GRASS	75% "	4# / ACRE
SG	SIDEOATS GRAMA	75% "	4# / ACRE

+ALL DISTURBED AREAS NOT PLANTED IN GROUND COVER SHALL BE SEEDED W/ MIXTURE OF NATIVE GRASSES (SEE LANDSCAPING DETAIL FOR EROSION CONTROL TECHNIQUE)

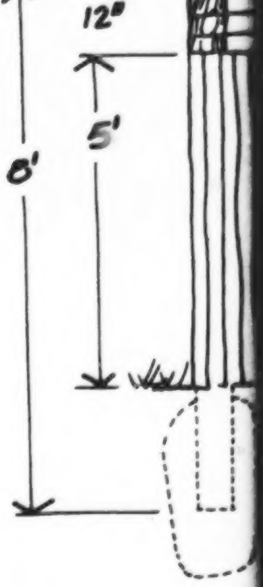
PRELIMINARY LANDSCAPING

SOIL

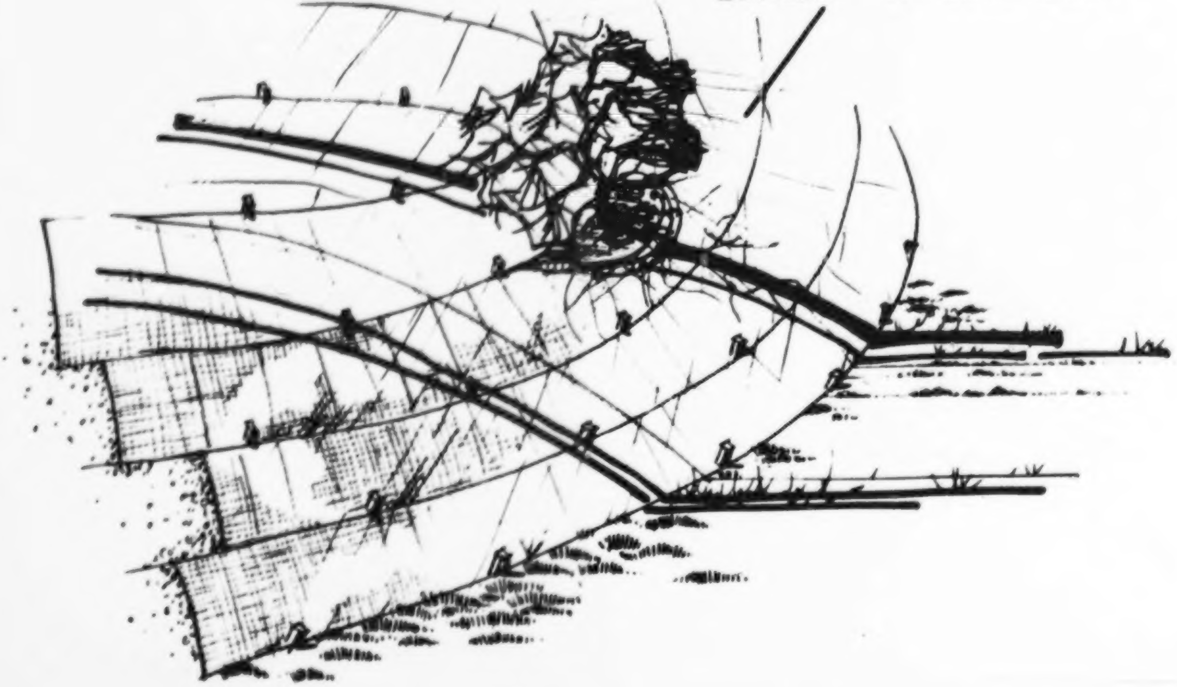
THE FOLLOWING SOIL CONDITIONS WERE FOUND TO BE REPRESENTATIVE WITHIN THE PROJECT SITE.

- A SANDY LOAM
- B LOAMY SAND (PREDOMINATE SURFACE MATERIAL)
- C SAND
- D PARTIALLY DECOMPOSED GRANITE (PREDOMINATE SUBSOIL MATERIAL-AND APPEARING ON THE SURFACE IN SEVERAL LOCATIONS)

STOCKPILE MATERIALS A & B FOR TOPSOIL MATERIAL. (APPLY 6" DEEP AND THOROUGHLY MIX W/ 1" NATIVE PEAT)



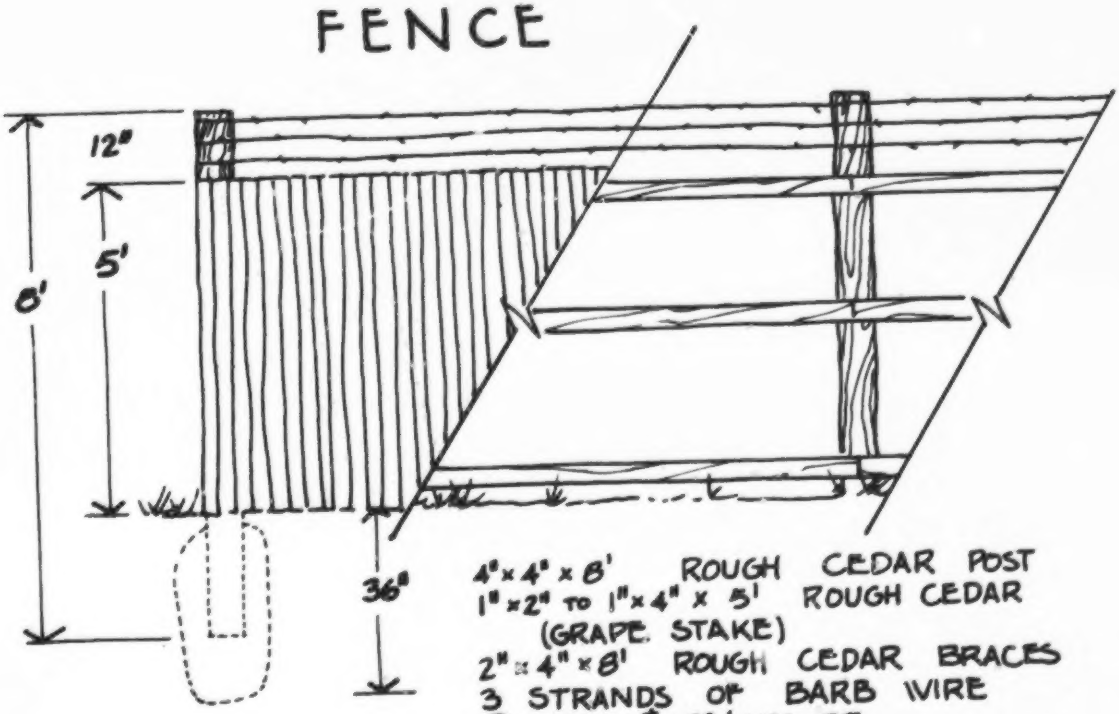
EROSION CONTROL



STRIPS OF BURLA
FABRIC STAKED
PREPARED SEED
BANKS WILL CO
AND PREVENT T
BEING WASHED

NDSCAPING DETAILS

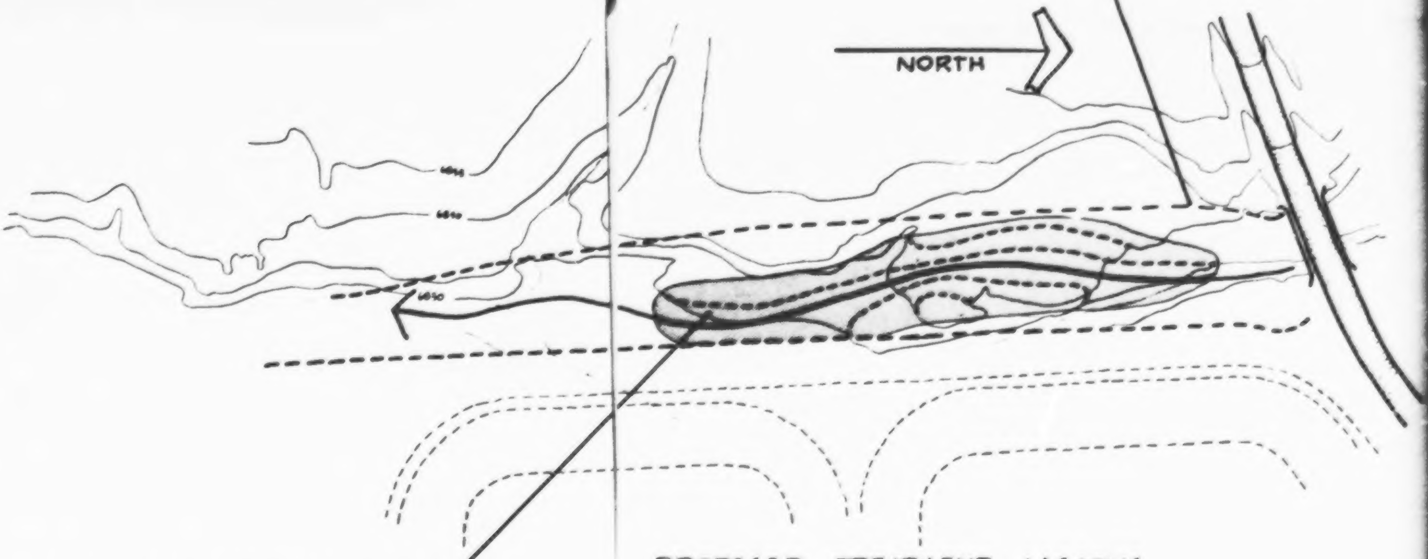
FENCE



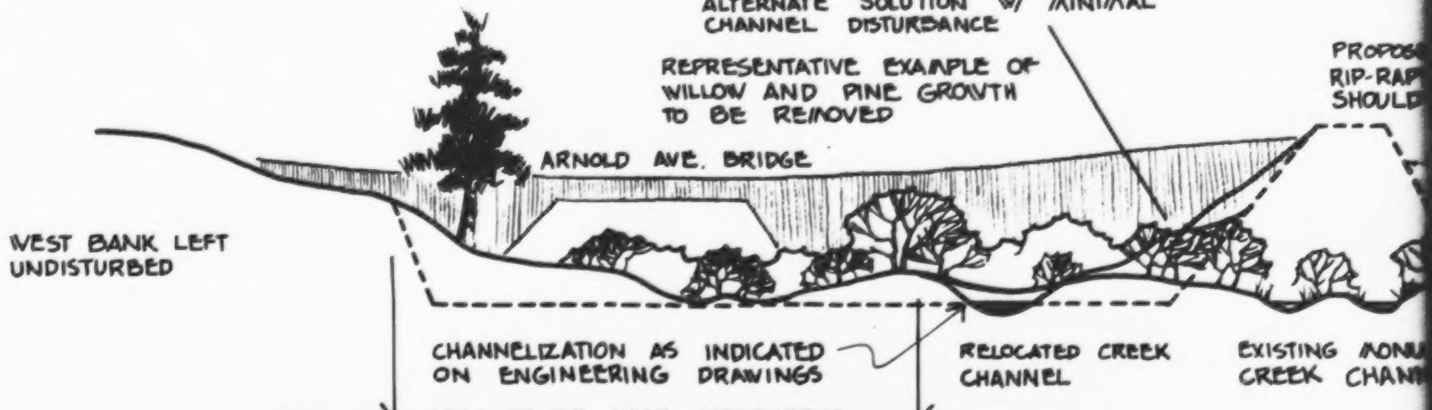
4" × 4" × 8' ROUGH CEDAR POST
1" × 2" TO 1" × 4" × 5' ROUGH CEDAR
(GRAPE STAKE)
2" × 4" × 8' ROUGH CEDAR BRACES
3 STRANDS OF BARB WIRE
@ APPROX. $\$4^{20}$/ LIN. FT.
CHAIN LINK AS PER ENG. DRAWINGS @ APPROX. $\$6^{00}$ / LIN. FT.[1]

STRIPS OF BURLAP OR JUTE MESH FABRIC STAKED DOWN OVER THE PREPARED SEED BED ON SLOPED BANKS WILL CONSERVE MOISTURE AND PREVENT THE SEEDS FROM BEING WASHED AWAY.

[1] EVERITT LUMBER CO., GREELEY, CO.


EXTENSIVE CHANNELIZATION OF
WILL DESTROY THE NATURAL QU
ENVIRONMENT. SEVERAL LARG
HEAVY WILLOW GROWTH WITHI
AREA WILL BE LOST.
NORTH
PROPOSED TREATMENT LAGOONS
A CHANNEL CORRECTION DESIGNED
TO COMPLEMENT THE NATURAL
CONTOURS W/ MINIMUM DISTURBANCE

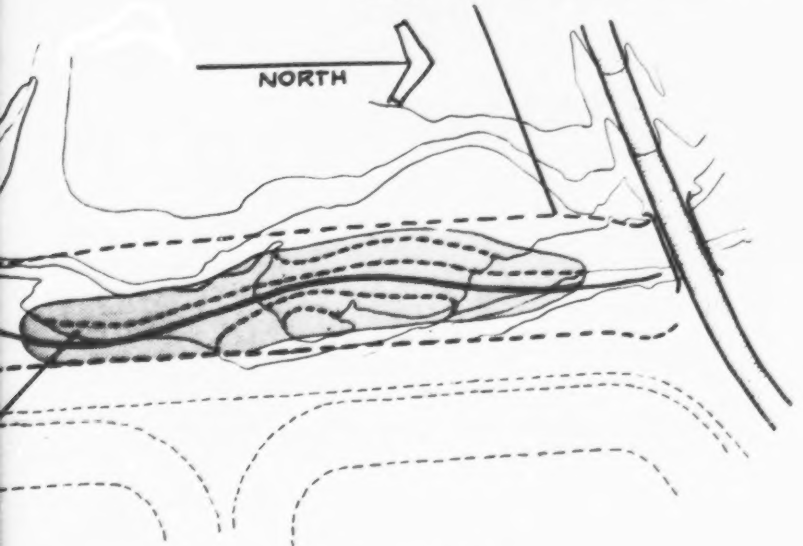
ALTERNATE CHANNELIZATION CONCEPT


ALTERNATE SOLUTION W/ MINIMAL
CHANNEL DISTURBANCE
PROPOS
RIP-RAP
SHOULD
REPRESENTATIVE EXAMPLE OF
WILLOW AND PINE GROWTH
TO BE REMOVED
ARNOLD AVE. BRIDGE
WEST BANK LEFT
UNDISTURBED
CHANNELIZATION AS INDICATED
ON ENGINEERING DRAWINGS
RELOCATED CREEK
CHANNEL
EXISTING MONU
CREEK CHANN
AREA TO BE LEFT UNDISTURBED

EAST - WEST CROSS SECTION THROUGH LAGOON #2
NO SCALE

overleaf

EXTENSIVE CHANNELIZATION OF MONUMENT CREEK WILL DESTROY THE NATURAL QUALITY OF THE ENVIRONMENT. SEVERAL LARGE PINES AND HEAVY WILLOW GROWTH WITHIN THE EXCAVATION AREA WILL BE LOST.



PROPOSED TREATMENT LAGOONS

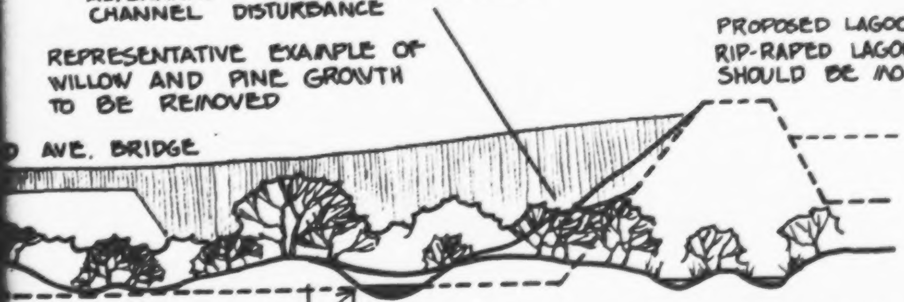
CHANNELIZATION CONCEPT

ALTERNATE SOLUTION W/ MINIMAL CHANNEL DISTURBANCE

REPRESENTATIVE EXAMPLE OF WILLOW AND PINE GROWTH TO BE REMOVED

PROPOSED LAGOONS
RIP-RAPED LAGOON EMBANKMENT SHOULD BE MORE IRREGULAR

D AVE. BRIDGE



N AS INDICATED
ING DRAWINGS

RELOCATED CREEK CHANNEL

EXISTING MONUMENT CREEK CHANNEL

EFT UNDISTURBED

CROSS SECTION THROUGH LAGOON #2

overleaf

ARTIST'S CONCEPTION